British Columbia Reproductive Care Program

British Columbia Perinatal Database Registry
Annual Report 2004

Working to Optimize
Foetal, Maternal and Infant Health in British Columbia

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The BCRCP is pleased to present the 2004 British Columbia Perinatal Database Registry Annual Report and wishes to recognize all the above mentioned for their vision and dedication.

The BCRCP wishes to thank the members of the 2004 Reports Development Committee for their diligent work in bringing this task to fruition.

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HIGHLIGHTS AND EXECUTIVE SUMMARY

The 2004 Annual Report includes perinatal data from three fiscal years (April 1 to March 31) 2000/2001, 2001/2002, and 2002/2003. For Neonatal/Perinatal/Infant Mortality reports, only the years 2000/2001 and 2001/2002 are included because complete information on infant mortality is not available until at least one year after the birth takes place. **Only singleton pregnancies, deliveries and births are included. The data provide evidence regarding issues pertaining to the care, treatment and outcomes of mothers and newborns in British Columbia. BC residents who delivered out of province are not captured in this report.**

Table 1 lists the category of perinatal data and the source of this data.

Table 1 **Sources of Perinatal Data**

Perinatal Data	BC Vital Statistics Agency	Discharge Abstract Database	BC Perinatal Database Registry
Miscarriages/Abortions	No	No, unless admitted to hospital	No
Therapeutic Abortions (<20 weeks gestational age)	No	Yes	No
Stillbirths	Yes	Yes	Yes
BC residents delivering out of province	No, but Stats Canada makes adjustments for these events	Yes, if in hospital in Canada (excluding Quebec)	No
Non-residents of BC delivering in BC hospitals	Yes	Yes	Yes
Fiscal/Calendar Year	Calendar	Fiscal	Fiscal
Home Births	Yes	No	Yes
Pregnancies vs Births (i.e., are multiple births identified separately as 1 or as 2, 3, 4, 5 etc.)	Both	Both	Both

Source: BC Vital Statistics Agency, BC Perinatal Database Registry, Canadian Institute for Health Information

Some of the key findings of this report are:

- Fertility rates and live birth rates in British Columbia have decreased by approximately 60% from 1953 to 2003.
- The figures indicate that obstetricians are providing care during delivery increasingly more often than family physicians, a trend observed in the national statistics where there has been a decrease in participation of family physicians in vaginal deliveries. Midwives are increasingly providing care during delivery with a steady increase from 2.7% in 2000/2001 to 3.7% in 2002/2003.
- Although there has been a general decrease in teen birth rates throughout the province from 2000/2001 to 2002/2003, the Northwest Health Service Delivery Area and Central Vancouver Island Health Service Delivery Area continue to have rates double the provincial rate.
- While smoking during pregnancy has decreased from 13.2% to 11.6% from 2000/2001 to 2002/2003 in BC, two health authorities (Interior Health Authority and Northern Health Authority) maintain a relatively high rate of >18%. The cessation of smoking during pregnancy continues to be a necessary lifestyle change that can conceivably be facilitated through intervention programs supported by the public health system.
- Implementation of the WHO/UNICEF 10 Steps for Baby-Friendly™ designation by facilities throughout Canada will help to further improve the initiation and duration of breastfeeding and to promote the WHO/UNICEF recommendation of exclusive breastfeeding at the time of discharge. The current breastfeeding rate in BC is 92.1%.
- Of the common indications for induction, induction of labour due to maternal condition increased in 2002/2003, indicating a possible association with increased maternal age and the tendency for labour requiring intervention with advanced pregnancies. Of the potential complications of induced labour, the risk of caesarean section delivery remains the highest.
- Studies have demonstrated that routine electronic foetal monitoring during labour and delivery, particularly for low-risk pregnancies, affords little significant benefit in reducing risk of perinatal complications. There has been a decrease in the use of electronic foetal monitoring in BC from 83.9% in 2000/2001 to 78.4% in 2002/2003.
- BC's episiotomy rate of 17.5% is lower than the national rate of 23.8%, although there is substantial variation within the Health Authorities. Studies indicate that the routine use of episitomies does not necessarily prevent extended lacerations or long-term genitourinary complications.

- The caesarean section rate in BC (26.9%) has followed the national trend of increasing caesarean sections and decreasing vaginal deliveries.
- The postpartum length of stay following vaginal deliveries as well as following caesarean section deliveries is steadily decreasing in BC, raising concerns regarding effective postpartum care and the impact that the transfer of care will have on community health practitioners.
- The total low birth weight rate (including low and very low birth weight) has remained relatively stable from 2000/2001 to 2002/2003 at approximately 4%. However, given that infants with low birth weights are at risk for long-term health problems as well as early death (before one year of age), the prevention of low birth weight remains an ongoing public health concern.
- Studies have demonstrated that one of the major contributing factors of infant mortality is low birth rate, which occurs more often in younger teen mothers and older mothers aged 35+. Both the stillbirth rate and perinatal mortality rate have decreased from 2000/2001 to 2001/2002 while the neonatal mortality rate and infant death rate have increased, suggesting that improvements are essential in the endeavour to reduce infant mortality to the lowest level and improve birth outcomes in BC.

BC women who deliver in Alberta hospitals are not captured in the BC Perinatal Database Registry. Therefore data from high outflow communities bordering Alberta may be skewed.

Definitions for terms used throughout the report can be found on page 51-54.

BACKGROUND

The Ministry of Health (Hospital Programs) and the British Columbia Medical Association (BCMA) under the auspices of the Continuing Advisory Subcommittee on Perinatal Care (CASC) initiated the British Columbia Reproductive Care Program (BCRCP) in June 1988. The BCRCP is overseen by a Provincial Perinatal Steering Committee and has representation from the Ministry of Health Services (MOHS), the Provincial Health Services Authority (PHSA), Children's and Women's Health Centre of BC, health care providers, health authorities and academic organizations.

One of the mandates of the BCRCP is "the collection and analysis of data to evaluate perinatal outcomes, care processes and resources via a province-wide computerized database". This mandate led to the development of the British Columbia Perinatal Database Registry (BCPDR), with its stated mission to collect, maintain, analyze and disseminate comprehensive, province-wide perinatal data for the purposes of monitoring and improving perinatal care. Rollout of the Registry began in 1994, with collection of data from a small number of hospital sites. Participation increased every year, resulting in full provincial data collection commencing April 1, 2000. The BCPDR is a relational database containing over 300 fields, and now with complete provincial data, is a valuable source of perinatal information.

Data Collection

The BCPDR consists of data collected from obstetrical facilities as well as births occurring at home attended by BC Registered Midwives. Participation in the registry is voluntary.

BC women who deliver in Alberta or in hospitals out of province are not captured in the BC Perinatal Database Registry. Therefore data from high outflow communities bordering Alberta will be under-reported.

Table 2 represents the population of women who were residents of the listed Health Service Delivery Areas (HSDA) of BC and the proportion of these women who delivered in the specified HSDA of their residence. For Fiscal Year 2002/2003, a total of 135 or 0.30% of the women who were residents of BC delivered in other provinces.

Table 2 Deliveries Per Health Service Delivery Area (HSDA) Fiscal Year 2002/2003

HSDA of British Columbia	Women who Delivered in BC	Women who Delivered Out of Province	% of Women who Delivered Out of Province
East Kootenay	671	46	6.90%
Okanagan	2416	5	0.20%
Thompson Cariboo Shuswap	1763	5	0.30%
Northeast	892	24	2.90%
Northern Interior	1513	19	1.30%
Northwest	999	13	1.30%
Northshore/Coast Garibaldi	2259	4	0.20%
South Vancouver Island	2578	3	0.10%
North Vancouver Island	999	3	0.30%
Fraser North	5486	3	0.10%
Fraser South	6997	2	0.03%
BC Unspecified	-	8	-
Total	**39246**	**135**	**0.30%**

Source: PURRFECT, Version 9 – ICD10 – September 15, 2004

The perinatal data presented in this report are collected from facilities throughout the province and imported into the central BC Perinatal Database Registry. Data from the Canadian Institute for Health Information (CIHI) and matched files from the British Columbia Vital Statistics Agency complement the data elements. The 2000/2001 and 2001/2002 deaths represented in this report consist of singleton pregnancy deaths identified by the BCPDR supplemented by deaths identified by Vital Statistics records, in order to provide complete mortality data for babies up to one year of age.

INTRODUCTION

The 2004 BCPDR Annual Report describes the current state of perinatal health in British Columbia (BC). In the 2004 Annual Report, there are three years of data to monitor trends for the selected indicators. These indicators have been chosen by the Reports Development Committee because they are clinically relevant and lend themselves to analysis that may suggest changes in care delivery. It must be remembered that this report is only one source of data to monitor trends and guide policy and clinical practice.

Definitions for terms used throughout the report can be found on page 51-54.

Methodological Issues:

The 2004 Annual Report includes perinatal data from three fiscal years (April 1 to March 31) 2000/2001, 2001/2002 and 2002/2003. Where possible, data for all fiscal years are reported. For the Neonatal/Perinatal/Infant Mortality reports, only data from the year 2000/2001 and 2001/2002 are available. **Only singleton pregnancies, deliveries and births are included, as presented in Table 3.**

Table 3 **Total Births Per Fiscal Year**

Fiscal Year	Singleton Births		Multiple Births (includes twins and other multiple births)		Total Births
	#	%	#	%	#
2000/2001	39,396	97.3	1,078	2.7	40,494
2001/2002	39,267	97.3	1,075	2.7	40,342
2002/2003	39,129	96.9	1,255	3.1	40,384

Source: BC Perinatal Database Registry
Note : The numbers correspond to births, not pregnancies. Late terminations are included.

Health Service Delivery Areas (HSDAs) and Health Authorities (HAs) are based on either place of delivery (i.e. where the birth occurs) or place of residence (i.e. where the mother lives). Data limitations or methodological issues concerning the data source are noted in the text that accompanies each indicator.

The data contain only linked mothers and newborns for each fiscal year. The year in which this data set is contained is dependent on when the discharge occurs. If the data for mother and newborn are from different fiscal years then the data are reported in the fiscal year in which the last individual is discharged. For example,

- if a woman gives birth March 28, 2002 and is discharged March 31, 2002 and the newborn is also discharged March 31, 2002, then their information is contained in the 2001/2002 fiscal year data.
- if a woman gives birth March 28, 2002 and is discharged March 31, 2002 and the newborn is discharged April 4, 2002, then the data for both mother and newborn will be contained in the fiscal year 2002/2003 data set, not the 2001/2002 data set.

In Focus Section:

The In Focus section highlights a specific topic in greater detail than in Sections I, II or III. The criteria for selecting an In Focus topic are that it deals with a clinically interesting question (in part, this is determined by the number and type of requests received by BCRCP) and gives expanded details on selected issues. Strategies employed in the selection of a topic include:

- examining the number of requests received by BCRCP to determine if there exists a critical mass for a topic and
- identifying a recent issue in the media (either public or research) that could be enhanced with some analysis of data from BCRCP.

For this issue of the Annual Report, the In Focus question deals with caesarean sections.

Reference is made throughout the document to BCRCP resources for select indicators (e.g., clinical practice guidelines). These references can be accessed on the BCRCP web site at <http://www.rcp.gov.bc.ca>.

SECTION I

DEMOGRAPHICS AND TYPES OF CARE PROVIDER

SECTION I

Demographics and Types of Care Provider

Population of Women in BC Aged 15 - 54, 2001, 2002 and 2003

Table 4 Population of Women in BC Aged 15-54, 2001, 2002 and 2003

Age	2001		2002		2003	
	#	%	#	%	#	%
15-19	135,396	11.2	136,957	11.3	136,346	11.2
20-24	131,632	10.9	135,558	11.1	139,695	11.4
25-29	134,100	11.1	132,883	10.9	131,951	10.8
30-34	151,954	12.6	151,738	12.5	150,082	12.3
35-39	171,069	14.2	166,689	13.7	161,777	13.3
40-44	176,337	14.6	176,976	14.6	178,068	14.6
45-49	162,915	13.5	167,711	13.8	171,919	14.1
50-54	145,268	12.0	147,522	12.1	150,758	12.4
Total	1,208,671	100	1,216,034	100	1,220,596	100

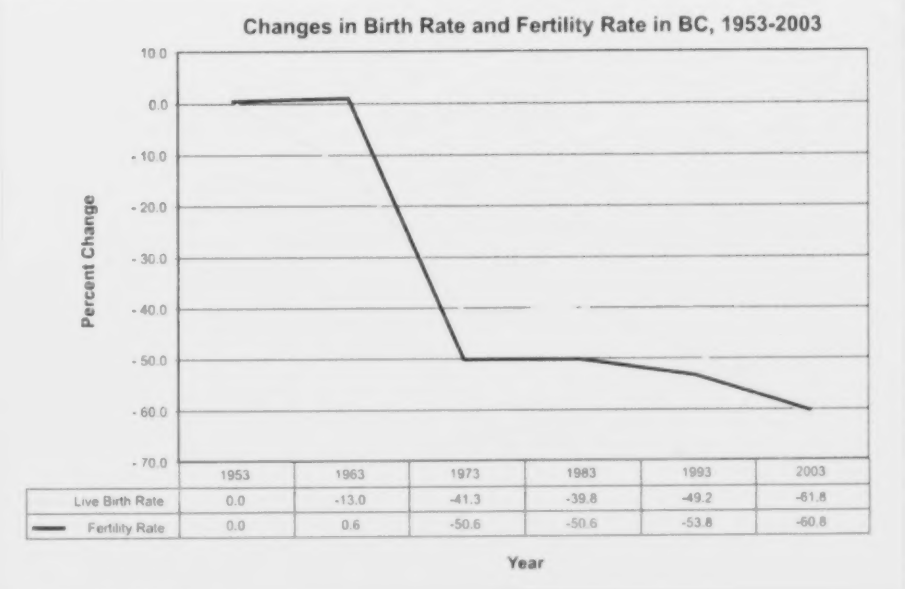
Source: Statistics Canada
Prepared by: BC Stats
Population counts are based on calendar year. Figures as of July 1 of the year stated.

Changes in Birth Rate and Fertility Rate in BC, 1953 - 2003

The proportion of women delaying childbirth has increased in Canada in recent years (Health Canada, 2000). Research has shown that antepartum complications associated with this delay include pre-eclampsia, placenta previa (associated with antenatal hospital admissions) and chronic medical conditions; intrapartum complications may include malpresentations and operative delivery (Prysak & Lorenz, 1995). Other studies have ascertained that infants born to older mothers are at increased risk for pre-term birth and intrauterine growth restriction (Health Canada, 2000). Along with this delay, the actual rate of live births has shown a steady downward trend over the last five decades. Fertility rates have paralleled this decline, as shown in the following time-trend analysis.

Live birth rates and fertility rates have been extrapolated using 1953 as the baseline year of adjustment and 2003 as the ending year for the analysis. In 1953, the fertility rate per thousand and birth rate per thousand was 3,542 and 25.4, respectively. In 2003, the fertility rate per thousand was 1,388 and 9.7, respectively. As observed in Figure 1, both fertility rates and birth rates have decreased by 60.8% and 61.8% respectively since 1953.

Figure 1



Source: BC Vital Statistics Agency

Care Provider Present at Delivery by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

(Refer to Data Table 5A – APPENDIX 8)

The manpower retention and recruitment challenges for providers of maternal-child care in Canada are well known provincially and nationally. Subsequently, the trend in the past few years is that fewer specialists and family physicians are available for the provision of intrapartum care. The reasons for this are multiple including interference with lifestyle, interruption of office routine, insufficient training, insufficient numbers of cases to retain competency, costs of malpractice insurance and fear of litigation (Wiegers, 2003).

The care provider present at place of delivery is the designated person responsible at delivery and this may or may not be the primary care provider. Table 5 illustrates the provincial trends from 2000/2001 to 2002/2003 for designated health care providers at delivery. For the province in 2002/2003, obstetricians were the designated care provider at delivery for 48.2% of all births, family physicians for 44.3%, midwives for 3.7% and nurses for 3.1%. During this period, obstetricians were increasingly the designated care provider at delivery, while the number of family physicians providing this service decreased. This trend is consistent with national findings where family physicians' involvement in vaginal births in most Canadian provinces is decreasing (Kaczorowski & Levitt, 2000). The provincial trend is towards more deliveries attended by midwives (2.7% in 2000/2001 to 3.7% in 2002/2003 or approximately 1400 births/year) and fewer by nurses over the same three-year period 3.8% in 2000/2001 to 3.1% in 2002/2003.

Within the Health Authorities for 2002/2003, the frequency that obstetricians were designated care providers at delivery ranged from 25.1% Northern Health Authority (NHA) to 69.7% Provincial Health Services Authority (PHSA). The frequency that family physicians were designated care providers at delivery ranged from 26.6% (PHSA) to 70.3% (NHA). The frequency that midwives were designated care providers at delivery ranged from 1.0% (NHA) to 6.2% Vancouver Island Health Authority (VIHA). The frequency that nurses were designated care providers ranged from 1.2% of births (PHSA) to 4.9% of births Fraser Health Authority (FHA). Three Health Authorities had the obstetrician as the care provider at delivery in the majority of births Fraser Health Authority (FHA), Vancouver Coastal Health Authority (VCHA) and Provincial Health Services Authority (PHSA), and three Health Authorities had the family physician as the care provider at delivery in the majority of births Interior Health Authority (IHA), Northern Health Authority (NHA) and Vancouver Island Health Authority (VIHA).

Within the Health Service Delivery Area for 2002/2003, the frequency that obstetricians were designated care providers at delivery ranged from 15.5% East Kootenay (EK) to 71.0% Vancouver (VANC). The frequency that family physicians were designated care providers at delivery ranged from 23.0% (VANC) to 78.5% Northeast (NE). The frequency that midwives were designated care providers at delivery ranged from 0% Thompson-Cariboo-Shuswap (TCS), Northeast (NE) Northwest (NW) to 10.1% North Vancouver Island (NVI). The frequency that nurses were designated care providers ranged from 1.3% of births (VANC) to 6.3% of births Fraser South (FS).

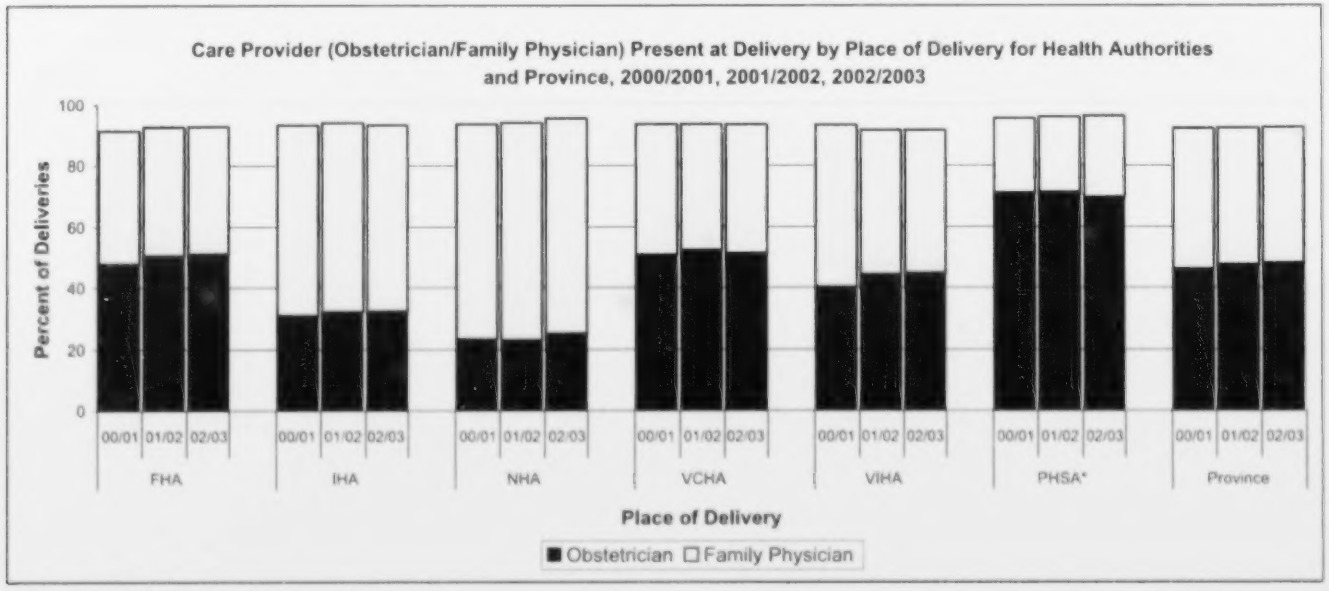
Table 5

Care Provider Present at Delivery by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		FHA				IHA					NHA				VCHA				VIHA				PHSA*	HB	Province
		FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total			
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Obstetrician	00/01	28.7	41.6	62.1	47.7	17.8	27.6	36.7	28.3	31.0	21.9	24.3	23.4	23.5	32.5	50.5	73.8	51.0	50.3	43.5	32.7	40.2	71.1	0.0	46.3
	01/02	29.7	44.0	65.7	50.4	16.0	30.0	38.9	27.4	31.8	16.1	26.3	24.7	23.2	35.4	55.3	69.2	52.8	56.9	48.0	34.6	44.2	71.2	0.0	47.8
	02/03	31.3	46.6	64.3	51.2	15.5	36.8	39.6	27.0	32.3	19.4	25.0	30.5	25.1	34.3	51.8	71.0	51.5	55.4	45.5	37.8	44.7	69.7	0.0	48.2
Family Physician	00/01	65.3	50.4	27.4	43.6	74.0	62.0	58.6	63.7	62.3	75.3	66.1	71.8	70.0	58.6	46.5	19.7	42.5	44.4	49.7	59.5	53.1	24.4	0.0	45.9
	01/02	64.5	49.4	25.4	42.2	69.5	61.4	57.4	66.9	62.2	80.3	65.6	70.5	70.8	55.7	40.8	25.1	40.8	37.6	42.5	55.5	47.4	24.7	0.0	44.5
	02/03	61.8	47.2	27.6	41.6	69.7	54.2	56.5	66.2	61.0	78.5	68.3	65.7	70.3	57.1	43.8	23.0	41.9	38.2	42.4	53.8	45.8	26.6	0.0	44.3
Midwife	00/01	1.0	1.7	1.4	1.4	0.0	5.0	0.8	0.0	0.8	0.0	0.8	0.1	0.4	2.4	0.0	3.8	2.2	2.2	5.9	5.5	4.5	1.4	98.9	2.7
	01/02	1.0	2.6	1.6	1.9	1.9	5.5	0.6	0.0	1.0	0.0	1.2	0.0	0.5	3.1	0.1	4.6	2.7	2.1	7.9	7.8	6.0	1.6	98.9	3.4
	02/03	1.2	2.8	1.6	1.9	2.3	6.7	1.1	0.0	1.4	0.0	2.2	0.0	1.0	3.0	0.1	4.4	2.7	3.6	10.1	6.6	6.2	1.9	99.2	3.7
Nurse	00/01	4.7	3.5	8.8	5.9	4.0	2.6	3.4	5.1	3.9	2.3	6.5	3.4	4.6	3.9	2.8	1.4	2.8	2.8	0.7	1.5	1.8	2.1	0.3	3.8
	01/02	4.5	2.2	6.9	4.6	5.3	2.3	2.9	2.0	2.8	2.9	4.7	3.9	4.0	3.5	3.5	0.9	2.6	3.1	1.3	1.8	2.1	1.8	0.0	3.2
	02/03	5.3	3.0	6.3	4.9	5.1	2.2	2.7	2.6	2.9	1.8	3.9	3.5	3.2	3.6	4.0	1.3	3.0	2.4	1.8	1.7	1.9	1.2	0.0	3.1
Other & Unknown	00/01	0.4	2.9	0.3	1.3	4.2	2.8	0.6	2.9	2.0	0.5	2.2	1.3	1.5	2.6	0.2	1.2	1.5	0.4	0.2	0.4	0.4	1.0	0.8	1.3
	01/02	0.3	1.8	0.4	0.9	7.4	0.8	0.2	3.7	2.2	0.7	2.2	0.9	1.4	2.3	0.2	0.3	1.0	0.3	0.3	0.3	0.3	0.7	1.1	1.0
	02/03	0.4	0.5	0.2	0.3	7.5	0.2	0.2	4.1	2.3	0.2	0.6	0.3	0.4	2.0	0.3	0.3	1.0	0.4	0.2	0.2	0.3	0.6	0.8	0.7

*PHSA - refers to BC Women's Hospital patients only

Figure 2



*PHSA - refers to BC Women's Hospital patients only

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

SECTION II

MATERNAL INDICATORS

SECTION II
Maternal Indicators

Teen Birth Rate by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

(Refer to Data Table 6A – APPENDIX 8)

According to Health Canada (2003), the national birth rate for teenage mothers has declined since 1991. Health Canada also reports that for the year 2000, 4.2% of live births were to mothers in the 18 to 19 year age group and approximately 2% to mothers under the age of 18 years. Quebec has the lowest rate of live births for teenage mothers 17 years or less. British Columbia has the lowest rate of live births for teenage mothers in the 18 to 19 year age group (Health Canada, 2003).

Studies have shown that teen pregnancies are associated with an increased risk of adverse consequences to the mother and newborn (Jolly, Sebire, Harris, Robinson & Regan, 2000). Many teens delay seeking prenatal care, receive lower rates of care and are often economically constrained. Teens may be unaware of or may participate in practices that negatively affect birth outcome, such as eating a less than optimal diet as well as using tobacco and alcohol (Health Canada, 2003).

The calculation of the percentage of teen births is based on place of residence of the mother. In 2002/2003, in British Columbia, there were 1583 births to mothers who were 19 years of age or less for an overall provincial rate of 4.0% (Table 6A). The percentage of births to this population has declined from 4.6% in 2000/2001 to 4.0% in 2002/2003. Decreases are seen across all age categories. However, the rates for 2002/2003 ranged from a high of 8.3% in the Northern Health Authority (NHA) to a low of 1.8% in the Vancouver Coastal Health Authority (VCHA). The lowest percentage of births in BC was to mothers in the 17 year or less age group at 1.3% (496 births), which is below the national rate of 1.9% (excluding the territories) (Health Canada, 2003).

Within the Health Authorities, the 2002/2003 data show that the Northwest (NW) Health Service Delivery area had the highest percentage of teen births at 9.9%, followed by Central Vancouver Island (CVI) at 8.0% and Northern Interior (NI) and North Vancouver Island (NVI) each with 7.7%. Similar to 2000/2001 and 2001/2002, Richmond (RICH) at 1.2% and Vancouver (VANC) at 1.5% had the lowest percentage of births to this age group (Table 6).

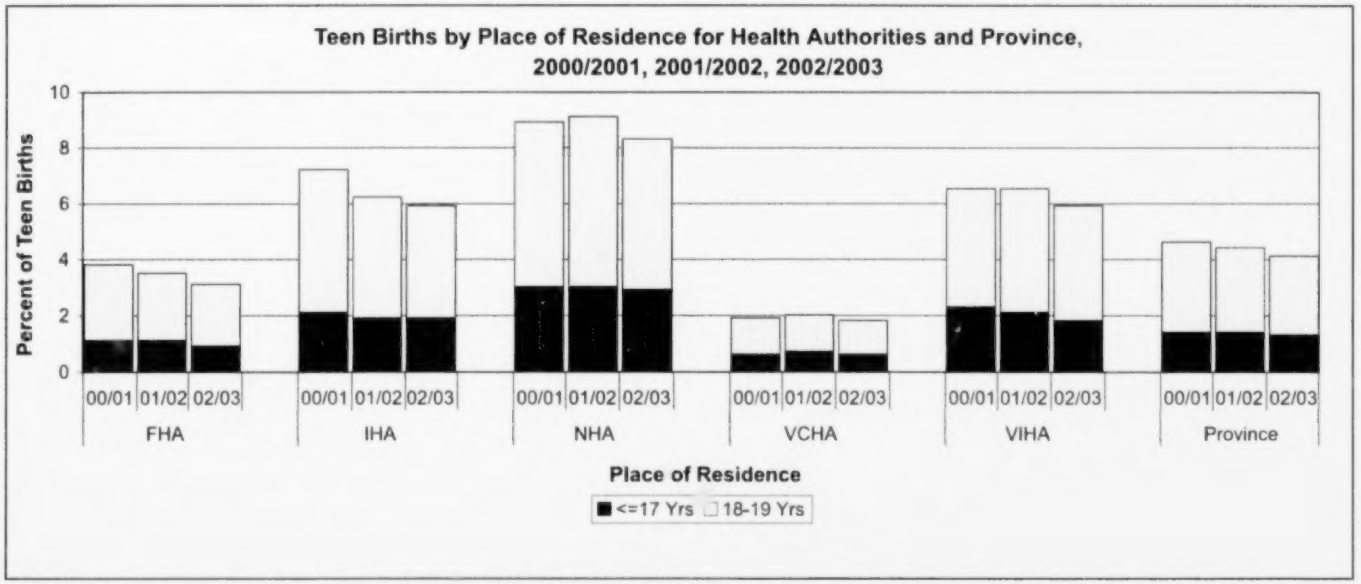
Although there is an overall decline in teen birth rates in the province, the discrepancies in the health areas may be influenced by social/cultural attitudes, rural/urban demographics and planning of services for this population.

Table 6

Teen Births by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		FHA				IHA					NHA				VCHA				VIHA				BC UNSPEC	NON RES	Province
		FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total			
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
<=17 years	00/01	1.6	0.9	1.0	1.1	3.5	1.2	1.6	2.5	2.1	3.2	2.2	4.2	3.0	0.9	0.2	0.6	0.6	2.8	3.9	1.3	2.3	0.0	0.0	1.4
	01/02	2.0	0.8	1.0	1.1	3.8	1.4	1.2	2.2	1.9	2.3	2.5	4.3	3.0	1.1	0.3	0.7	0.7	3.2	2.8	1.1	2.1	1.4	2.0	1.4
	02/03	1.7	0.5	0.8	0.9	1.4	1.3	1.8	2.5	1.9	2.0	2.9	3.7	2.9	1.1	0.3	0.5	0.6	2.3	2.6	1.1	1.8	4.7	8.7	1.3
18-19 Years	00/01	4.4	2.2	2.4	2.7	7.9	2.2	3.9	6.7	5.1	6.9	5.8	5.4	5.9	1.8	1.3	1.0	1.3	5.5	4.7	3.0	4.2	6.3	4.5	3.2
	01/02	4.2	2.0	2.1	2.4	6.7	2.5	3.6	4.9	4.3	5.7	5.8	7.0	6.1	1.6	1.2	1.3	1.3	5.9	6.0	2.7	4.4	5.6	4.0	3.0
	02/03	3.7	1.7	2.1	2.2	6.1	3.1	2.8	5.1	4.0	5.5	4.8	6.3	5.4	1.9	0.9	1.0	1.2	5.7	5.1	2.6	4.1	7.0	5.4	2.8
Total Teen Moms	00/01	6.0	3.1	3.3	3.7	11.4	3.3	5.5	9.2	7.2	10.0	8.0	9.6	8.9	2.7	1.5	1.7	1.9	8.3	8.7	4.3	6.5	6.3	4.5	4.6
	01/02	6.2	2.8	3.0	3.6	10.5	3.9	4.8	7.1	6.1	7.9	8.3	11.3	9.1	2.7	1.5	1.9	2.0	9.1	8.8	3.8	6.5	7.0	6.0	4.5
	02/03	5.4	2.2	2.9	3.1	7.5	4.3	4.6	7.6	5.9	7.4	7.7	9.9	8.3	3.0	1.2	1.5	1.8	8.0	7.7	3.7	5.9	11.6	8.0	4.0

Figure 3



Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Maternal Smoking Rate by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

(Refer to Data Table 7A – APPENDIX 8)

Maternal smoking in pregnancy is one negative lifestyle choice that can have adverse health effects on mothers and infants. There is substantial literature that indicates that prenatal smoking increases the risk of intrauterine growth restriction (IUGR), preterm birth, spontaneous abortion and stillbirth (Cnattingius, Granath, Petersson & Harlow, 1999; Cooke, 1998; Mendola, Moysich, Freudenheim, Shields, Schisterman, Graham, Vena, Marshall & Ambrosone, 1998). In Canada, from 1994 to 2001 the overall smoking rate among women under 50 years of age decreased slightly from 33% in 1994/1995 to 29% in 2000/2001. During the same period, the number of women who reported smoking during pregnancy declined significantly from 26% to 16% (Health Canada, 2004). It is hoped that this decline is due to increased awareness of the negative e ffects of smoking during pregnancy. Due to the self-reporting aspect in the data collection, the actual rate of smoking behaviour and exposure to smoke while pregnant may be under-reported.

According to Statistics Canada, women most likely to smoke and be exposed to second hand smoke were younger women, single women, women from low income households and women who had not completed secondary school education (Health Canada, 2004). In 2000/2001, 49% of the women under 25 years of age reported smoking during pregnancy. 36% of the women in this group who did not smoke, reported being exposed to smoke while pregnant. 13% of mothers 30 years of age and older reported smoking during pregnancy while 13% of the women in this group who did not smoke, reported being exposed to smoke while pregnant. Across Canada, British Columbia and Ontario had the lowest rates of maternal smoking or those exposed to smoking during pregnancy while Saskatchewan and the Atlantic provinces had the highest rates. Also in the period 2000/2001, immigrant mothers were reported less likely to smoke while pregnant compared to Canadian-born women (2% versus 22%). Although pregnant women are more likely to quit smoking before becoming pregnant, quit smoking during pregnancy or smoke fewer cigarettes, smoking continues to be a concern as data also shows that many women in all age groups resume smoking following birth. (Health Canada 2004, Statistics Canada 2004).

The BCRCP Provincial Database Registry defines smoking as smoking at any time during the current pregnancy. In British Columbia, the overall percentage of mothers who smoked during pregnancy decreased to 11.6% in 2002/2003 from 13.2% in 2000/2001. There continues to be a considerable range in the smoking behaviour in the Health Authorities (HA) with the Northern (NHA) and Interior (IHA) Health Authorities having the highest percentage of mothers who smoked at 18.5% and 18.4% respectively in 2002/2003 while Vancouver Coastal Health Authority (VCHA) had the lowest percentage of mothers who smoked at 5.3%. The East Kootenay (EK) Health Service Delivery Area (HSDA) had the highest reported smoking rate at 21.7% in 2002/2003. Other HSDAs with high rates of maternal smoking were Thompson-Cariboo-Shuswap (TCS) at 21.5%, Northeast (NE) at 19.4%, Northern Interior (NI) at 18.9%, Central Vancouver Island (CVI) at 17.3%, Northwest (NW) at 16.9%, Okanagan (OK) at 16.5%, North Vancouver Island (NVI) at 16.1% and Fraser East (FE) at 15.4%.

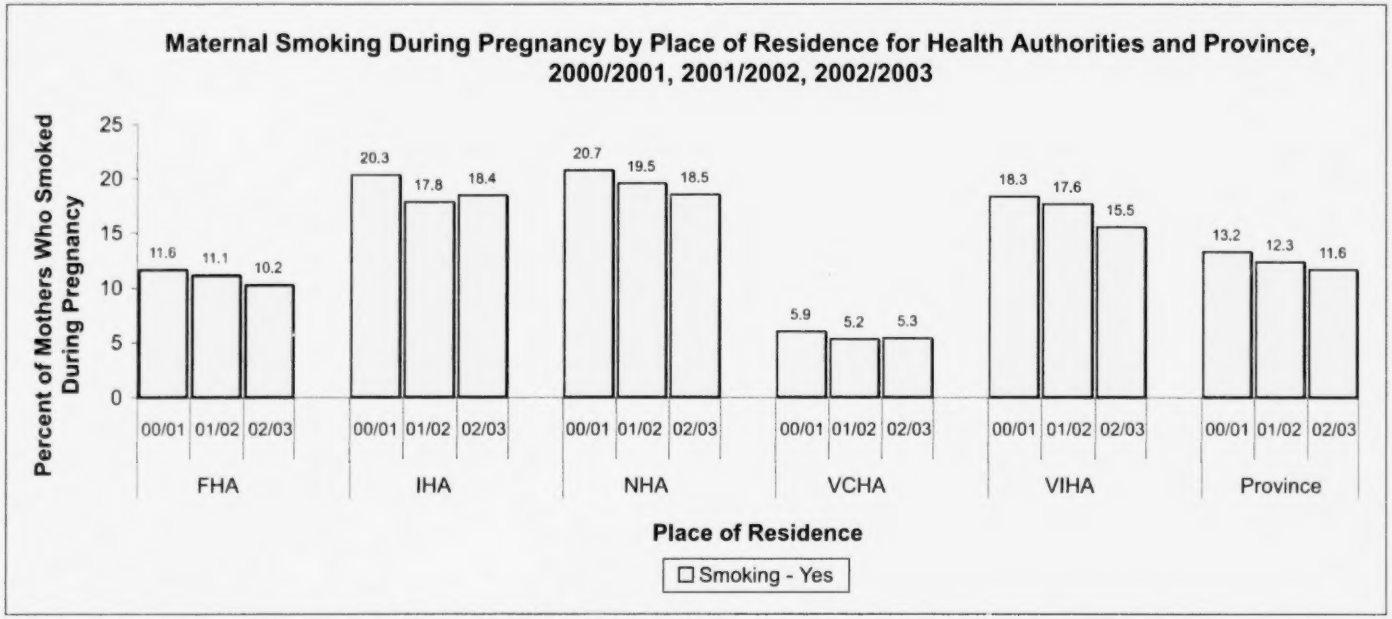
With many areas reporting maternal smoking rates in excess of 15% and with the knowledge that smoking during pregnancy can adversely impact birth outcomes, it is critical to monitor, document and report the rate of prenatal smoking accurately in order to promote the development of smoking prevention and cessation programs in our public health system.

Table 7

Maternal Smoking During Pregnancy by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

	FHA				IHA					NHA				VCHA				VIHA				BC UNSPEC	NON RES	Province
	FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total			
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
00/01	14.9	10.6	11.0	**11.6**	22.2	16.3	18.7	23.0	**20.3**	22.2	20.1	20.5	**20.7**	**8.6**	4.3	5.2	**5.9**	19.5	20.8	16.5	**18.3**	**20.8**	**12.1**	**13.2**
01/02	15.9	10.0	10.0	**11.1**	20.6	19.8	15.0	20.0	**17.8**	23.1	18.7	17.6	**19.5**	**6.8**	4.5	4.8	**5.2**	19.6	20.3	15.2	**17.6**	**19.7**	**12.7**	**12.3**
02/03	15.4	7.9	9.8	**10.2**	21.7	13.0	16.5	21.5	**18.4**	19.4	18.9	16.9	**18.5**	**7.8**	4.3	4.5	**5.3**	17.3	16.1	14.0	**15.5**	**27.9**	**11.4**	**11.6**

Figure 4



Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Breastfeeding at Discharge Rate by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

(Refer to Data Table 8A – APPENDIX 8)

The current WHO/UNICEF recommendation promotes exclusive breastfeeding for the first six months of life and continued breastfeeding and complementary foods into the second year of life and beyond. Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants (WHO/UNICEF, 2003).

The benefits of breast milk have been extensively researched with substantiation that infants who are breastfed suffer from fewer gastrointestinal illnesses, respiratory infections, juvenile diabetes and allergies (Gerstein, 1994; Lucas & Cole, 1990; Oddy, Peat & de Klerk, 2002; Oddy, Sly, de Klerk, Landau, Kendall, Holt & Stanley, 2003; Saarinen & Kajosaari, 1995). Evidence supports improved health for breastfeeding women such as reduced risk of inadvertent pregnancy, decreased osteoporosis, reduced risk of ovarian and breast cancer (Collaborative Group on Hormonal Factors in Breast Cancer, 2002; Paton, Alexander, Nowson, Margerison, Frame, Kaymakci & Wark, 2003; Rosenblatt & Thomas, 1993). Studies have also shown that children who were breastfed were less likely to be overweight or obese (Armstrong, Reilly & Child Health Information Team, 2002; von Kries, Koletzko, Sauerwald, von Mutius, Barnert, Grune & von Voss, 1999). Additionally, the benefits of breastfeeding related to the prevention of chronic adult diseases such as Crohn's and cardiovascular disease have been published in numerous studies (Klement, Cohen, Boxman, Joseph & Reif, 2004; Owen, Whincup, Odoki, Gigl & Cook, 2002).

According to Health Canada, although there have been large regional differences in breastfeeding rates across Canada, a steady increase in the initiation and duration of breastfeeding is noted (Health Canada, 2003). Results from the National Longitudinal Survey of Children and Youth (NLSCY) indicated that the proportion of children (under the age of two) who had received breast milk (regardless of the amount) increased from 75.1% to 81.9% from 1994/1995 to 1998/1999 (Health Canada, 2003). As reported by the Canadian Community Health Survey (CCHS), of the women who gave birth from 1996 to 2001, 64.6% acknowledged breastfeeding for three months or longer. For breastfeeding initiation, British Columbia leads the country with 93.5% initiating breastfeeding among women who had given birth in the last five years (Statistics Canada, 2000). The western region of Canada had higher initiation rates than Mid and Eastern Canada with the Atlantic Provinces and Quebec reporting the lowest Canadian rates for breastfeeding initiation. For duration of breastfeeding, British Columbia is second behind the Yukon (77.5%) with 72.3% of women reporting that they breastfed three months or longer (with infant receiving any amount of breast milk). Quebec is currently actively supporting the attainment of the Baby-Friendly™ designation through the Baby-Friendly™ Initiative in promoting increased initiation and duration across the province (Health Canada, 2001).

Overall in British Columbia, the data from the Perinatal Database Registry (PDR) for 2002/2003 indicates that 92.1% of mothers were breastfeeding at discharge[1] (data for singleton births only). All Health Authorities rated near the provincial average with four Health Authorities rating above 90 percent at discharge - Vancouver Island Health Authority (VIHA) (93.6%), Fraser Health Authority (FHA) (92.8%), Interior Health Authority (IHA) (92.4%), and Vancouver Coastal Health Authority (VCHA) (91.9%). BC's lowest rate of infants receiving breast milk was 87.5% in the Northern Health Authority (NHA). These rates are consistent with data reported in 2000/2001 and 2001/2002.

With many facilities working towards the WHO/UNICEF 10 Steps for Baby-Friendly™ designation and with the adoption of the breastfeeding definitions for exclusive breast milk, partial breast milk and no breast milk feedings by the Breastfeeding Committee for Canada (BCC)[2], it is anticipated that, in the coming year(s), the Perinatal Database Registry will provide a clearer reflection of the numbers of infants meeting the WHO/UNICEF recommendations of exclusive breastfeeding at the time of discharge (see Appendix 1 for definitions).

[1] Infant may have also received artificial formula during the early postnatal period.

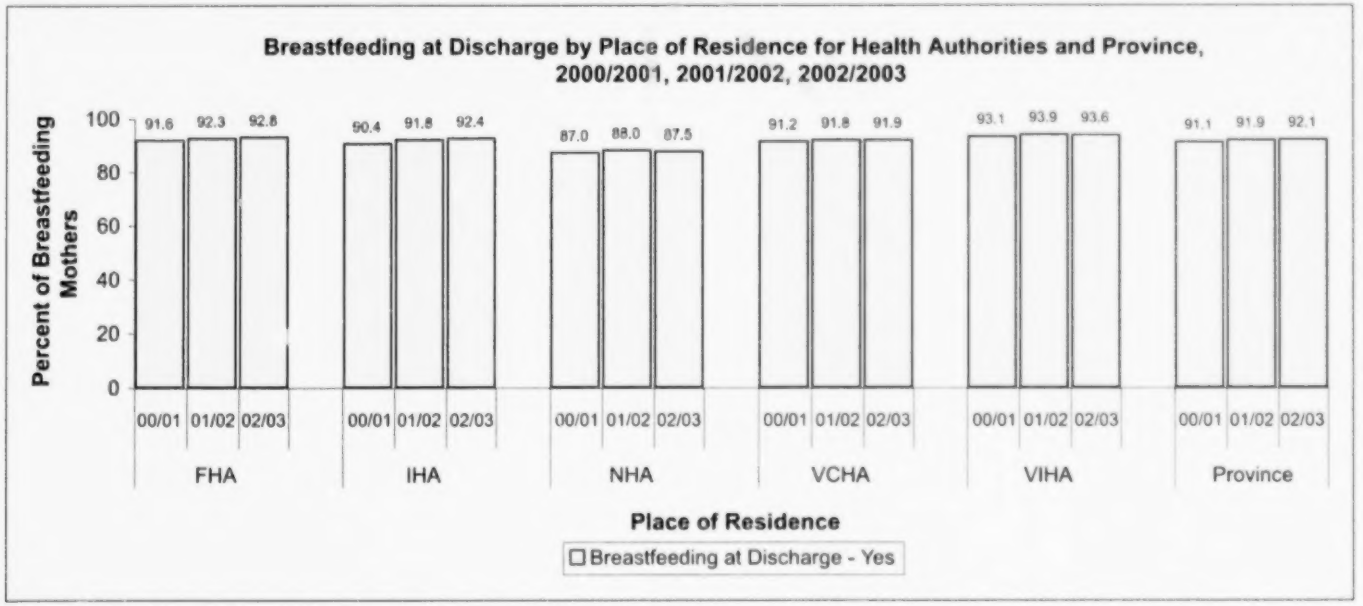
[2] As of April 2004 discharges, breastfeeding definitions in the PDR have been updated to include the WHO/UNICEF recommendations. The current Annual Report does not include these definitions.

Table 8

Breastfeeding at Discharge by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

	FHA				IHA					NHA				VCHA				VIHA				BC UNSPEC	NON RES	Province
	FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total			
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
00/01	88.9	92.8	91.8	**91.6**	93.5	91.5	92.6	86.0	**90.4**	88.7	84.7	89.3	**87.0**	**96.2**	92.3	88.9	**91.2**	92.6	92.1	93.9	**93.1**	72.3	**86.2**	**91.1**
01/02	89.3	93.6	92.5	**92.3**	90.1	93.2	93.3	89.9	**91.8**	88.9	87.4	88.1	**88.0**	**97.1**	93.4	89.4	**91.8**	92.6	92.2	95.4	**93.9**	85.7	**87.0**	**91.9**
02/03	90.8	93.8	92.8	**92.8**	92.3	93.1	92.2	92.5	**92.4**	88.2	86.3	88.7	**87.5**	**96.3**	91.6	90.2	**91.9**	92.5	94.3	94.2	**93.6**	89.8	**85.9**	**92.1**

Figure 5



Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Induction of Labour Rate by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

(Refer to Data Table 9A – APPENDIX 8)

The labour induction rate is defined as the number of delivering women whose labour is induced by medical (prostaglandin and/or oxytocin) or surgical means (artificial rupture of membranes, ARM) before the onset of labour, expressed as a proportion of all women giving birth in a given time and place (Health Canada, 2003).

Induction rates are reported for singleton births. Late terminations are not included in the data. The labour induction rates for the province were 21.5% in 2002/2003, 22.5% in 2001/2002, and 21.2% in 2000/2001. In 2002/2003, by Health Authority (HA), induction rates ranged from 20.0% Vancouver Coastal Health Authority (VCHA) to 24.2% Vancouver Island Health Authority (VIHA), and by Health Services Delivery Area (HSDA) the rates ranged from 16.7% North Vancouver Island (NVI) to 27.5% South Vancouver Island (SVI). Comparison with national data is difficult as national induction rates include late terminations and multiple pregnancies.

Common indications for induction include post term pregnancy, pre-labour rupture of membranes, evidence of foetal compromise, maternal disease, foetal demise and logistics. Table 9 shows the indications for induction for the province for 2000/2001, 2001/2002, and 2002/2003.

Table 9 Indication for Induction, 2000/2001, 2001/2002, 2002/2003

	2000/2001		2001/2002		2002/2003	
	#	%	#	%	#	%
Post term	3,282	39	3,465	39	2,994	35
Maternal Condition	1,945	23	2,021	23	2,080	25
Prelabour Rupture of Membranes	1,677	20	1,687	19	1,597	19
Foetal Compromise	571	7	610	7	581	7
Foetal Demise	108	1	105	1	87	1
Logistics	104	1	114	1	91	1
Other	597	7	758	9	922	11
Unknown	75	1	79	1	75	1

The decrease in inductions for post-term may be due to better adherence to clinical practice guidelines and management of post-term pregnancy. The increase in inductions related to maternal conditions may relate to a trend of increased maternal age and the risk factors accompanying pregnancy during later reproductive years. A steady increase in the 'other' category suggests that a more detailed classification of indications may be justified to capture the specifics.

Potential complications associated with labour induction include increased risk of caesarean delivery, uterine hyperstimulation, uterine rupture, cord prolapse with ARM and non-reassuring foetal heart tracing. Table 10 compares the provincial rates of caesarean delivery, uterine stimulation, uterine rupture, and cord prolapse in induced labour versus spontaneous labour for 2000/2001, 2001/2002, and 2002/2003.The rate of caesarean delivery is considerably higher in the induced labour group compared to spontaneous labour. The rate of cord prolapse is slightly higher in the induced labour group. There are no differences between the two groups in the rate of uterine rupture.

Figure 6

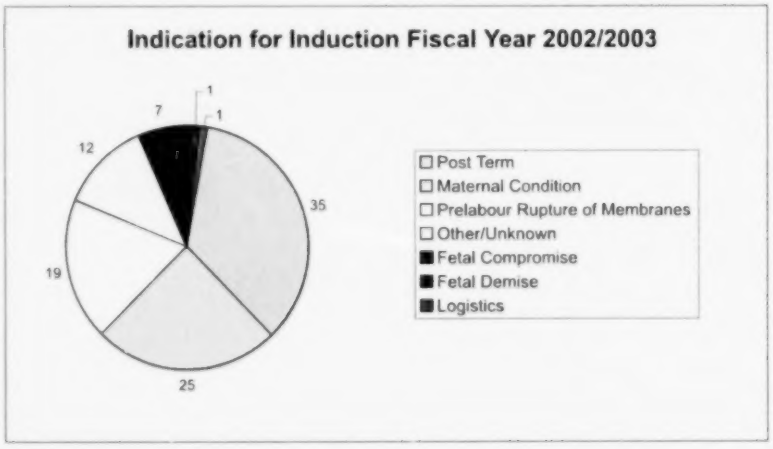


Table 10

Induced Labour vs Spontaneous Labour, 2000/2001, 2001/2002, 2002/2003

	Spontaneous Labour			Induced Labour		
	2000/2001	2001/2002	2002/2003	2000/2001	2001/2002	2002/2003
Caesarean Section	14%	16%	15%	23%	24%	26%
Uterine hyperstimulation	N/A	N/A	N/A	0.90%	1.10%	0.80%
Cord prolapse	0.10%	0.20%	0.10%	0.30%	0.20%	0.30%
Uterine rupture	0.10%	0.10%	0.10%	0.10%	0.05%	0.10%

Table 11

Induction of Labour by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

	FHA				IHA					NHA				VCHA				VIHA				PHSA*	HB	Province
	FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total			
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
00/01	21.2	22.2	23.6	22.6	25.0	26.3	25.5	16.4	22.6	22.1	17.0	19.0	18.8	22.1	19.7	23.8	22.0	22.1	20.1	26.9	24.2	16.8	2.2	21.2
01/02	24.8	25.2	25.3	25.2	25.8	25.1	24.8	19.9	23.3	24.3	18.9	20.0	20.6	20.2	20.7	21.5	20.8	24.6	20.5	28.0	25.6	17.7	1.7	22.5
02/03	24.5	23.3	24.2	23.9	20.2	25.0	23.9	19.8	22.2	20.9	18.9	23.8	20.8	20.7	17.1	21.6	20.0	23.0	16.7	27.5	24.2	17.0	3.3	21.5

*PHSA - refers to BC Women's Hospital patients only

Figure 7

*PHSA - refers to BC Women's Hospital patients only

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Electronic Foetal Monitoring Rate by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003 (Refer to Data Table 12A – APPENDIX 8)

Healthy women with no risk factors for adverse perinatal outcome should receive foetal health surveillance in labour by intermittent auscultation (IA) (SOGC, 2002).

Meta-analysis of randomized clinical trials (SOGC, 2002; SOGC, 1995) report that electronic foetal monitor (EFM) changes indicating non-reassuring foetal status have poor predictive value i.e., there is a high false positive rate which leads to increased operative deliveries (with or without foetal blood sampling). Normal EFM tracings have a high predictive value. When comparing outcomes for EFM versus IA in healthy women without risk factors for adverse perinatal outcome, maternal morbidity is increased with EFM related to increased operative delivery, while perinatal morbidity shows no improvement over those mothers receiving IA (or no monitoring) in labour. The Society of Obstetricians and Gynaecologists of Canada (SOGC) recommend that EFM should be reserved for those mothers with adverse risk factors in labour or for those women with non-reassuring IA findings.

Data on foetal health surveillance in labour is collected using electronic foetal monitoring as the data collection indicator. A limitation of this is that definitive conclusions may not be made regarding the use of IA. "No" EFM may mean use of IA, or may indicate that no foetal health surveillance in labour was done. The latter usually only occurs when women enter the hospital ready to deliver and time restrictions prevent any surveillance at all. Overall, these numbers are relatively small.

It is apparent from the British Columbia Perinatal Database Registry (BCPDR) that use of IA (or no monitoring) during labour occurs for only a minority of women in BC. However, it is encouraging that the provincial rate for IA use (or no monitoring) in labour has increased from 16.1% in 2000/2001, to 18.6% in 2001/2002, and 21.6% in 2002/2003 (Table 15). The true rates may be even higher as women who receive ANY EFM during labour, including a 20-minute EFM tracing, are currently coded in the BCPDR as having received EFM during labour.

The rate of IA (or no monitoring) use in BC for 2002/2003 by Health Authority (Table 15) ranges from 15.3% Vancouver Coastal Health Authority (VCHA) to 20.4% Northern Health Authority (NHA), and by Health Service Delivery Area from 7.3% Okanagan (OK) to 42.7% South Vancouver Island (SVI). The Vancouver Island Health Authority (VIHA) has the lowest rates of EFM use in labour over the three-year period from 2000 to 2003. These lower rates may be attributed to data definitions used for data input or may reflect clinical practice whereby IA (or no monitoring) is used more frequently for healthy women in labour. Despite the lower rates of EFM in the VIHA, the VIHA also has the highest caesarean section rates with SVI having an IA rate (or no monitoring) of 42.7% and a caesarean section rate of 32.3% (Table 17). This data is discordant with the literature, which suggests that higher EFM rates are associated with higher caesarean section rates.

With more intermittent auscultation (and less EFM) being performed in 2002/2003 than in 2000/2001 and 2001/2002, it is worthwhile to evaluate the trend in newborn outcomes during the same time period. The percentage of singleton newborns with 1 & 5 minute apgars between 0-3, 4-6, and >7 are outlined in Table 12 and it can be seen that there has been a generalized improvement in the 1 & 5 minute apgars over the three-year period.

Table 12 Apgar Scores

Fiscal Year	0-3		4-6		>7	
	1 min	5 min	1 min	5 min	1 min	5 min
2000/2001	2.96%	0.73%	10.66%	1.17%	86.13%	97.80%
2001/2002	2.88%	0.69%	9.65%	1.13%	87.20%	97.88%
2002/2003	2.75%	0.66%	9.13%	0.99%	87.92%	98.11%

Source: BC Perinatal Database Registry

Although the SOGC recommends that arterial cord blood gases should be routinely obtained (SOGC, 2002), the BCRCP Fetal Health Surveillance Guideline (BCRCP, 1997) suggests specific clinical situations when arterial cord gases should be obtained, and indicates that an acceptable alternative to routine arterial cord gases is to obtain a sample of cord and delay analysis until the newborn's condition is assessed. Umbilical cord blood sampling for umbilical pH and base excess has been done with increasing frequency from 2000/2001 to 2002/2003. In 2000/2001, 23.39% of all newborns had arterial cord blood sampling and in 2001/2002, 27.36% of all newborns had arterial cord blood sampling completed. In 2002/2003, the rate increased to 30.26% of all newborns. The rate of arterial cord blood sampling in individual facilities ranged from 0% (facilities with <25 births/year) to 91.1% (Source: Perinatal Database Registry).

Table 13 Arterial Cord Blood Sampling

Fiscal Year	Arterial Cord Blood Sampling Done		Total Newborns
	Number	Percent**	
2000/2001	9,494	23.39	40,591
2001/2002	11,063	27.36	40,439
2002/2003	12,260	30.26	40,521

Source BC Perinatal Database Registry

** (Total # of Newborns that had cord samples done/Total # of Newborns) x 100

Note: The Perinatal Database Registry only collects the information on arterial cord blood samples. If the sample is not identified as an arterial sample, the information is not collected. The cord arterial gas pH and cord arterial gas base excess/deficit values are recorded in the Perinatal Database Registry

Table 14

Electronic Foetal Monitoring by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

	FHA				IHA					NHA				VCHA				VIHA				PHSA*	Province
	FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total		
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
00/01	82.9	88.9	86.9	**87.0**	68.7	80.0	93.8	81.0	**85.5**	88.2	83.3	84.5	**84.8**	85.9	86.4	88.8	**87.0**	70.5	72.5	81.2	**76.2**	**85.0**	**83.9**
01/02	81.5	90.9	82.9	**85.7**	79.0	69.8	91.4	80.0	**84.3**	92.7	82.6	82.7	**85.3**	84.7	90.3	77.1	**83.7**	69.6	68.9	73.0	**71.1**	**81.8**	**81.4**
02/03	77.6	92.2	77.7	**83.1**	83.8	71.2	92.7	65.6	**80.6**	85.4	76.9	78.3	**79.6**	83.6	91.2	80.5	**84.7**	71.0	64.8	57.3	**63.0**	**80.9**	**78.4**

*PHSA - refers to BC Women's Hospital patients only

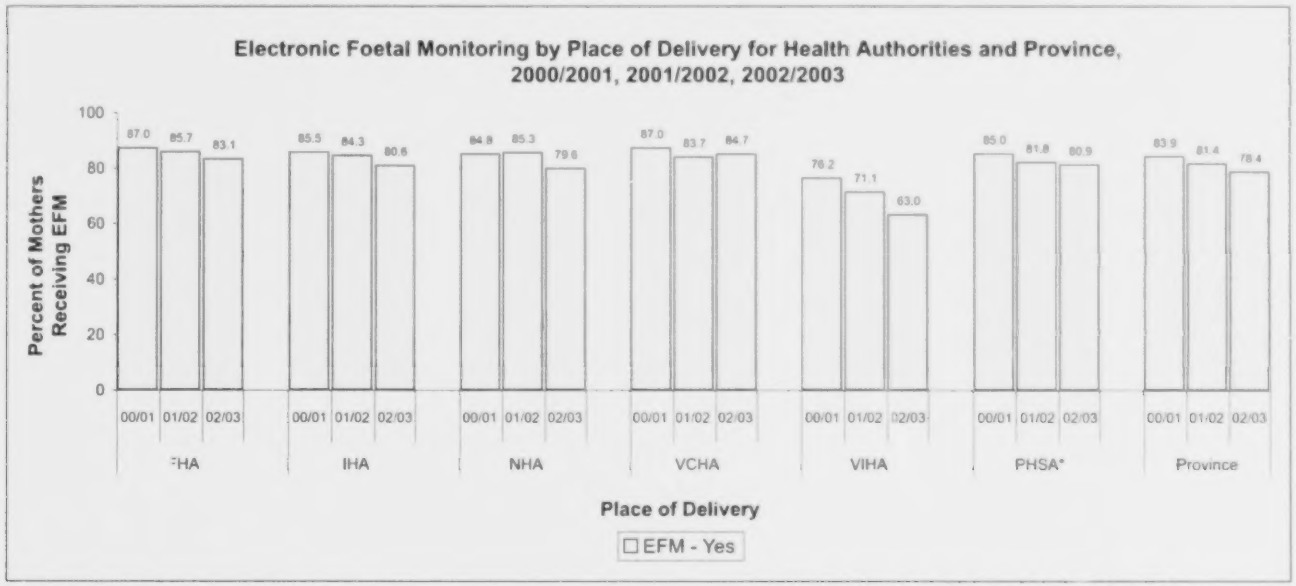
Table 15

No Electronic Foetal Monitoring or Intermittent Auscultation Only by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

	FHA				IHA					NHA				VCHA				VIHA				PHSA*	Province
	FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total		
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
00/01	17.1	11.1	13.1	**13.0**	31.3	20.0	6.2	19.0	**14.5**	11.8	16.7	15.5	**15.2**	14.1	13.6	11.2	**13.0**	29.5	27.5	18.8	**23.8**	**15.0**	**16.1**
01/02	18.5	9.1	17.1	**14.3**	21.0	30.2	8.6	20.0	**15.7**	7.3	17.4	17.3	**14.7**	15.3	9.7	22.9	**16.3**	30.4	31.1	27.0	**28.9**	**18.2**	**18.6**
02/03	22.4	7.8	22.3	**16.9**	16.2	28.8	7.3	34.4	**19.4**	14.6	23.1	21.7	**20.4**	16.2	8.8	19.5	**15.3**	29.0	35.2	42.7	**37.0**	**19.1**	**21.6**

*PHSA - refers to BC Women's Hospital patients only

Figure 8



*PHSA - refers to BC Women's Hospital patients only
Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Episiotomy Rate by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

(Refer to Data Table 16A – APPENDIX 8)

Episiotomies were originally thought to decrease pain, trauma, and long-term genitourinary and sexual function morbidity. Until the 1970s, episiotomies were often done routinely, particularly for women having their first baby (Cunningham, Grant, Leveno, Gilstrap, Hauth & Wenstrom, 2001; Schoon, 2001). Since the 1970s, the episiotomy rate has steadily declined. Recent research has shown that the routine use of episiotomy has not proven to prevent either extended lacerations or long-term genitourinary complications (Carroli & Belizan, 2004; Klein, Gauthier, Robbins, Kaczorowski, Jorgensen, Franco, Johnson, Waghorn, Gelfand, Guralnick, Luskey & Joshi, 1994). The Society of Obstetricians and Gynaecologists of Canada (SOGC) now recommend episiotomies only for foetal or maternal concerns in labour.

The British Columbia provincial rate of episiotomies has followed the national trend of declining rates at 17.5% in 2002/2003, decreasing from 19.0% in 2000/2001, and 18.6% in 2001/2002. Compared to the national data as published by Health Canada in the Canadian Perinatal Health Report (2003), BC is below the Canadian average of 23.8%. Only Manitoba, Yukon, Northwest Territories, and Nunavut have lower episiotomy rates than BC (Health Canada, 2003).

Within BC, the rate of episiotomy varies between Health Authorities (HAs) and Health Service Delivery Areas (HSDAs). Home births in BC have the lowest rate at 1.2% for 2002/2003 and the Provincial Health Services Authority (PHSA) has the highest rate at 23.6%. The Interior Health Authority (IHA), Northern Health Authority (NHA), and Vancouver Island Health Authority (VIHA) have rates consistently below the provincial average while the PHSA, Fraser Health Authority (FHA) and Vancouver Coastal Health Authority (VCHA) have rates above the provincial average. It is possible that the higher risk associated with births occurring in the PHSA may account for the higher episiotomy rate in this health authority. There are widely varying rates among health service delivery areas within the health authorities, with the exception of VIHA, which shows reasonably consistent rates. In the IHA for example, the rate varies from a low of 8.4% in the Thompson-Cariboo-Shuswap (TCS) HSDA to a high of 15% in the East Kootenay (EK) HSDA. A closer comparison between HSDAs particularly around indications, laceration rates, and maternal and newborn outcomes may facilitate a better understanding of what factors influence the rate of episiotomy and what factors may be important to consider in identifying an optimal target.

Table 16

Episiotomies by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

	FHA				IHA					NHA				VCHA				VIHA				PHSA*	HB	Province
	FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total			
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
00/01	17.3	20.6	25.4	**22.0**	13.1	12.3	12.6	13.5	**12.9**	18.7	11.9	11.8	**13.5**	18.3	22.7	19.5	**19.9**	15.0	14.5	13.1	**14.0**	**26.0**	**0.8**	**19.0**
01/02	21.4	17.8	26.0	**21.9**	13.7	14.7	14.6	11.5	**13.5**	19.1	11.7	11.8	**13.7**	19.6	23.2	16.6	**19.6**	15.6	12.5	9.9	**12.3**	**25.5**	**0.2**	**18.6**
02/03	17.2	18.5	24.3	**20.7**	15.0	10.9	12.6	8.4	**11.4**	15.6	10.7	9.5	**11.7**	17.7	23.1	19.2	**19.6**	13.9	10.6	10.7	**11.7**	**23.6**	**1.2**	**17.5**

*PHSA - refers to BC Women's Hospital patients only

Figure 9

*PHSA - refers to BC Women's Hospital patients only
Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Method of Delivery Rate (Vaginal vs. Caesarean Section) by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

(Refer to Data Table 17A – APPENDIX 8)

The nationwide trend of increasing caesarean section rates since 1994/1995 continues. Health Canada (2003) reports a Canadian rate of 21.2% in 2000/2001. British Columbia has the third highest rate in Canada following New Brunswick and Newfoundland for 2000/2001 at approximately 24% (Health Canada, 2003), well above the Canadian average. In 2001/2002 the caesarean section rate in Canada increased to an unprecedented high of 22.5% (CIHI, 2004). Studies have shown that the increase in the overall caesarean section rate may be due to an increase in older first time mothers, increase in induction rates, increase in maternal requests for primary caesarean section, decrease in rates of vaginal birth after caesarean (VBAC) and change in recommendations regarding breech deliveries (Hannah, 2004; Heffner, Elkin & Fretts, 2003; Joseph, Young, Dodds, O'Connell, Allen, Chandra & Allen, 2003; Martin, Hamilton, Sutton, Ventura, Menacher & Munsen, 2003).

The British Columbia caesarean section rate increased to 26.9% in 2002/2003. BC has followed the national trend of increasing rates with 23.6% in 2000/2001, 26.2% in 2001/2002, to the current documented high. The rates for the health authorities for 2002/2003 ranged from a low of 26.0% in the Fraser Health Authority (FHA) to a high of 29.0% in the Vancouver Island Health Authority (VIHA). The Provincial Health Services Authority (PHSA) was the only health authority to reflect a decrease in the caesarean section rate from 28.4% in 2001/2002 to 27.5% in 2002/2003. It will be interesting to observe whether this is the beginning of a downward trend. It is important to recognize that Registered Midwives transfer care to an obstetrician or family physician surgeon when a caesarean section is required. These caesarean births are reflected in the hospital data.

There is relatively little variation in the caesarean section rates within the Health Service Delivery Areas (HSDAs). However, two HSDAs have surpassed a rate of 30% with 32.3% for South Vancouver Island (SVI) and 30.4% for Vancouver (VANC). Both the Thompson-Cariboo-Shuswap (TCS) HSDA and the Northwest (NW) HSDA follow closely with rates of 29.9% and 29.8% respectively. It would be invaluable to explore the primary indication for caesarean section and other relevant data, such as maternal age, that may be contributing to the higher rates, as an avenue to analyze the impact on the caesarean section rate.

See the In Focus section of this report for a comprehensive analysis of caesarean sections in British Columbia.

Table 17

Method of Delivery by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		FHA				IHA					NHA				VCHA				VIHA				PHSA*	HB	Province
		FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total			
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
Caesarean Section	00/01	22.4	22.4	22.7	**22.5**	18.4	19.7	23.1	27.0	**23.5**	21.9	21.6	23.0	**22.1**	23.6	25.4	26.8	**25.2**	23.3	22.2	25.3	**24.1**	**26.3**	0.0	**23.6**
	01/02	23.6	25.6	26.6	**25.6**	18.1	22.2	24.4	29.6	**25.3**	21.0	26.6	26.0	**25.0**	26.3	28.9	28.9	**28.0**	26.6	23.8	29.3	**27.5**	**28.4**	0.0	**26.2**
	02/03	25.3	25.5	26.7	**26.0**	27.2	28.0	26.4	29.9	**27.8**	24.6	25.5	29.8	**26.5**	24.9	29.3	30.4	**28.0**	25.9	25.3	32.3	**29.0**	**27.5**	0.0	**26.9**
Vaginal	00/01	77.6	77.6	77.3	**77.5**	81.6	80.3	76.9	73.0	**76.5**	78.1	78.4	77.0	**77.9**	76.4	74.6	73.2	**74.8**	76.7	77.8	74.7	**75.9**	**73.7**	**100.0**	**76.4**
	01/02	76.4	74.4	73.4	**74.4**	81.9	77.8	75.6	70.4	**74.7**	79.0	73.4	74.0	**75.0**	73.7	71.1	71.1	**72.0**	73.4	76.2	70.7	**72.5**	**71.6**	**100.0**	**73.8**
	02/03	74.7	74.5	73.3	**74.0**	72.8	72.0	73.6	70.1	**72.2**	75.4	74.5	70.2	**73.5**	75.1	70.7	69.6	**72.0**	74.1	74.7	67.7	**71.0**	**72.5**	**100.0**	**73.1**

*PHSA - refers to BC Women's Hospital patients only

Figure 10

*PHSA - refers to BC Women's Hospital patients only
Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Postpartum Length of Stay (Vaginal Deliveries) 2000/2001, 2001/2002, 2002/2003

(Refer to Data Table 18A APPENDIX 8)

Current scientific knowledge does not provide conclusive evidence concerning the ideal length of stay post birth. Although it is well known that significant physiological and psychological changes occur in the first few days after birth, especially around the third or fourth day (Eaton, 2001), the hospital total length of stay (LOS) (admission to discharge) for vaginal births in Canada has decreased significantly from 3.6 days in 1991/1992 to 2.4 days in 2000/2001[3] (Health Canada, 2003).

Rates for 2002/2003 for British Columbia indicate that 66.9% of mothers had a postpartum LOS for vaginal births of less than 48 hours. The rates of postpartum LOS of less than 48 hours for the health authorities varies from a high of 78.6% in the Fraser Health Authority (FHA) to a low of 56.5% in the Vancouver Island Health Authority (VIHA). The BC data over the last three years mirrors the Canadian trend of decreasing length of stay.

Within the health authorities, there are sectors throughout the province where the postpartum LOS is significantly different from the provincial average. For example, the Kootenay Boundary (KB) HSDA demonstrates a rate of only 44.7% of mothers discharged in less than 48 hours. The Fraser South (FS) HSDA on the other hand, shows a rate of 87.0% of mothers discharged in less than 48 hours.

The high number of women discharged in less than 48 hours, makes the joint discharge guidelines published by the CPS/SOGC (1996) currently in use difficult to apply on a consistent basis. Although the actual rate of serious adverse outcomes with early postpartum discharge is low, there is no consistency in how care is provided throughout the postpartum period, particularly during the critical third and fourth postpartum days. A large transfer of responsibility has shifted to Community Health practitioners, often with little personnel or financial support. The BCRCP Report on the Findings of a Consensus Symposium on the Provision of Postpartum Services in British Columbia (2002) recommends a seamless care delivery system with common standards of care regardless of place of care or care provider (BCRCP, 2002). Adoption of a suggested standard template by professional organizational bodies would contribute towards reducing overlap of services and optimizing care delivery in the province.

[3] The lack of national figures for postpartum length of stay (vaginal deliveries) precludes direct postpartum length of stay comparisons.

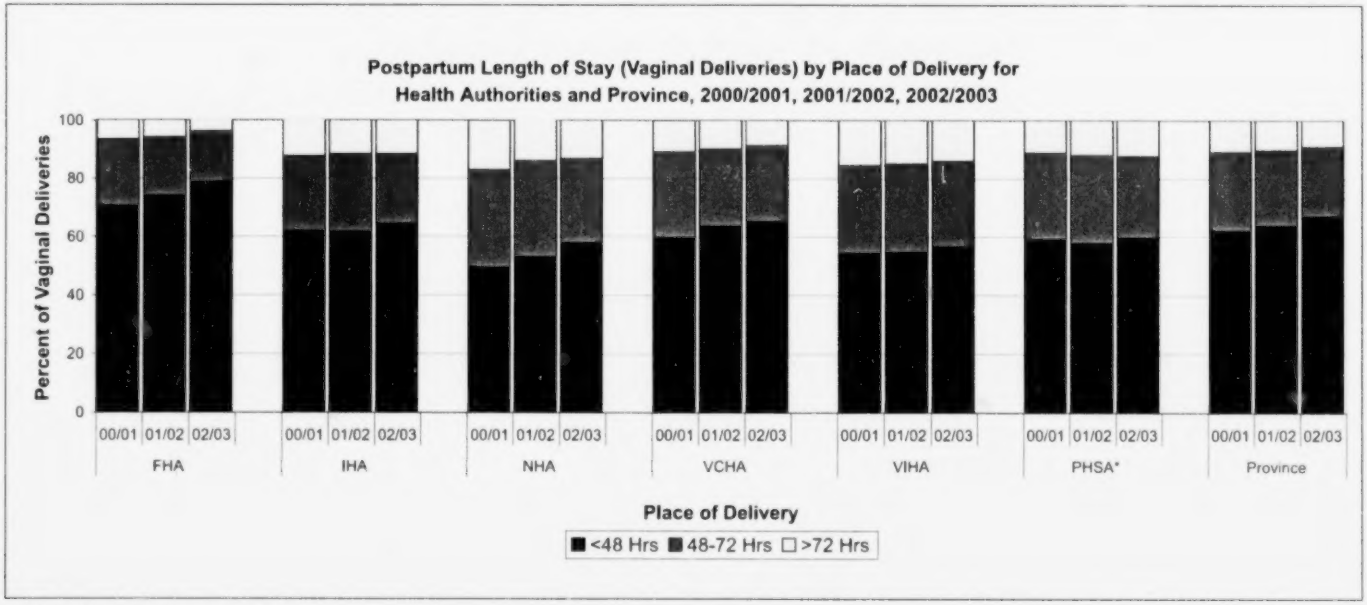
Table 18

Postpartum Length of Stay (Vaginal Deliveries) by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		FHA				IHA					NHA				VCHA				VIHA				PHSA*	Province
		FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total		
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
<48 Hours	00/01	68.5	62.8	78.8	**70.6**	58.9	46.2	62.1	67.8	**61.9**	44.9	46.1	58.3	**49.3**	57.0	68.1	55.6	**59.6**	52.0	57.7	54.4	**54.2**	**59.0**	**61.9**
	01/02	71.4	67.1	81.6	**74.0**	59.9	41.0	63.2	68.2	**61.6**	48.4	53.5	56.7	**53.0**	60.1	72.9	59.6	**63.6**	56.4	59.3	52.0	**54.8**	**57.8**	**63.7**
	02/03	78.3	69.0	87.0	**78.6**	61.1	44.7	65.8	69.0	**64.3**	54.4	62.4	53.5	**57.7**	61.3	73.3	63.1	**65.1**	57.9	59.6	54.5	**56.5**	**59.5**	**66.9**
48-72 Hours	00/01	26.2	27.6	18.4	**22.7**	27.0	32.5	25.9	22.6	**25.7**	35.7	35.9	27.5	**33.4**	28.9	27.7	31.2	**29.3**	30.0	27.9	31.0	**30.1**	**29.7**	**27.1**
	01/02	22.3	24.6	14.7	**20.0**	27.6	36.9	25.3	24.6	**26.5**	32.2	34.3	31.3	**32.9**	25.7	23.0	29.8	**26.3**	27.1	30.4	32.2	**30.2**	**30.0**	**25.9**
	02/03	17.9	24.6	10.9	**17.4**	27.3	34.0	22.4	21.9	**23.9**	30.0	28.4	28.7	**28.9**	27.1	23.7	26.7	**26.1**	27.4	27.6	31.1	**29.3**	**28.0**	**23.8**
> 72 Hours	00/01	5.2	9.6	4.8	**6.7**	14.0	21.3	12.1	9.6	**12.5**	19.4	18.0	14.2	**17.2**	14.0	4.2	13.1	**11.0**	18.0	14.4	14.6	**15.7**	**11.3**	**11.0**
	01/02	6.2	8.3	3.8	**6.0**	12.5	22.1	11.5	9.2	**11.9**	19.4	12.3	12.0	**14.2**	14.3	4.1	10.6	**10.1**	16.5	10.4	15.7	**15.0**	**12.2**	**10.4**
	02/03	3.9	6.4	2.1	**4.1**	11.6	21.3	11.9	9.1	**11.8**	15.6	9.3	17.7	**13.4**	11.5	3.1	10.2	**8.8**	14.7	12.8	14.4	**14.2**	**12.5**	**9.3**

*PHSA - refers to BC Women's Hospital patients only

Figure 11



*PHSA - refers to BC Women's Hospital patients only
Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Postpartum Length of Stay (Caesarean Section Deliveries) 2000/2001, 2001/2002, 2002/2003

(Refer to Data Table 19A APPENDIX 8)

The total LOS (admission to discharge) for caesarean section deliveries in Canada is steadily decreasing, following a similar decrease in LOS for vaginal deliveries. In Canada, the LOS for caesarean section was 6.3 days in 1991/1992 declining to 4.4 days in 2000/2001 (Health Canada, 2003)[4]. In 2000/2001, 35% of Canadian women could expect a hospital stay of less than four days.

British Columbia has continued to follow the national trend of decreasing LOS throughout most Health Authorities. The postpartum LOS for caesarean section deliveries has decreased consistently over the last 3 years, from 74.6% of mothers discharged 96 hours or less in 2000/2001 to 77.6% in 2001/2002, and 80.1% in 2002/2003. There is considerable divergence in postpartum LOS throughout the province. The Northern Health Authority (NHA) has the lowest rate of mothers discharged in 96 hours or less at 70.1% for 2002/2003. In contrast, the highest rate of mothers discharged in 96 hours or less is the Fraser Health Authority (FHA) at 89.5% for the same year.

There is also considerable variation in the rate of postpartum LOS for caesarean section deliveries within the Health Authorities. The greatest disparity is demonstrated in the Interior Health Authority (IHA) where the rates range from 56.5% of mothers discharged in 96 hours or less in the Kootenay Boundary (KB) Health Service Delivery Area (HSDA) to 83.3% in the East Kootenay (EK) HSDA for the year 2002/2003. The discrepancy is inconsistent with rural and urban geography. The reason for the significant variation is unclear but may feasibly impact efforts to standardize hospital and community follow-up services.

[4] The lack of national figures for postpartum length of stay (caesarean section deliveries) precludes direct postpartum length of stay comparisons.

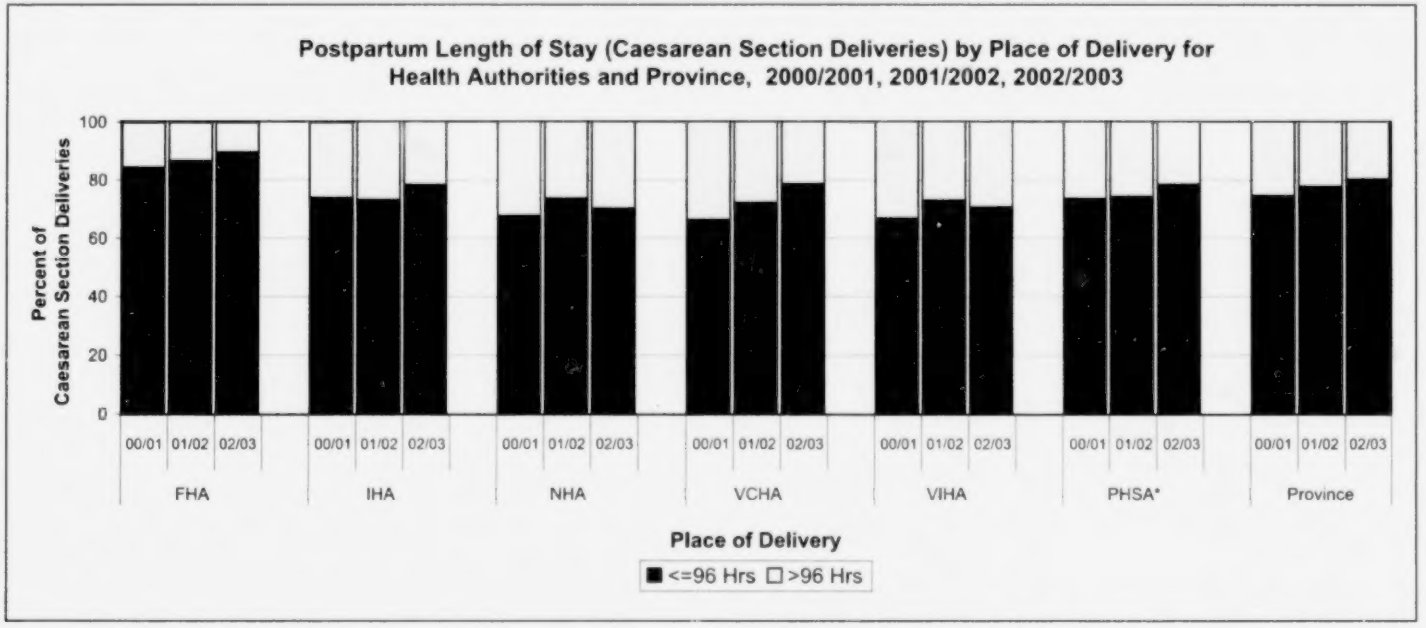
Table 19

Postpartum Length of Stay (Caesarean Section Deliveries) by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		FHA				IHA					NHA				VCHA				VIHA				PHSA*	Province
		FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total		
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
<=96 Hours	00/01	85.7	78.1	90.2	**84.6**	60.8	48.5	77.4	78.4	**74.1**	6.7	69.9	64.8	**67.6**	59.4	80.7	62.0	**66.2**	60.8	71.3	68.9	**66.8**	**73.4**	**74.6**
	01/02	86.0	83.3	90.3	**86.9**	64.2	52.7	74.5	77.3	**73.0**	68.2	78.1	70.1	**73.6**	67.1	78.8	71.2	**72.1**	69.1	74.0	74.9	**72.9**	**74.2**	**77.6**
	02/03	93.2	84.8	91.8	**89.5**	83.3	56.5	77.8	83.1	**78.2**	75.3	76.0	57.7	**70.1**	77.0	88.5	72.0	**78.5**	69.7	70.5	70.7	**70.4**	**78.3**	**80.1**
>96 Hours	00/01	14.3	21.9	9.8	**15.4**	39.2	51.5	22.6	21.6	**25.9**	33.3	30.1	35.2	**32.4**	40.6	19.3	38.0	**33.8**	39.2	28.7	31.1	**33.2**	**26.6**	**25.4**
	01/02	14.0	16.7	9.7	**13.1**	35.8	47.3	25.5	22.7	**27.0**	31.8	21.9	29.9	**26.4**	32.9	21.2	28.8	**27.9**	30.9	26.0	25.1	**27.1**	**25.8**	**22.4**
	02/03	6.8	15.2	8.2	**10.5**	16.7	43.5	22.2	16.9	**21.8**	24.7	24.0	42.3	**29.9**	23.0	11.5	28.0	**21.5**	30.3	29.5	29.3	**29.6**	**21.7**	**19.9**

*PHSA - refers to BC Women's Hospital patients only

Figure 12



*PHSA - refers to BC Women's Hospital patients only

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

SECTION III

FOETAL AND NEWBORN INDICATORS

SECTION III
FOETAL AND NEWBORN INDICATORS

Low and Very Low Birth Weight Rate by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

(Refer to Data Table 20A – APPENDIX 8)

"Preterm birth (less than 37 completed weeks gestation) is the most important perinatal health problem in Canada" (Preterm Birth Prevention Conference, Ottawa, Canada 1998). There is evidence to show that infant low birth weight and mortality are important indicators of the health of a population and although preterm births generally account for less than 10% of all births, newborns with a low birth weight account for 75% of all deaths before the age of one year (Chance, 1997). This population group is at risk for having life-long health effects impacting on the child's health such as cognitive, behavioural, mental and social development (National Institute of Child Health & Human Development, 2003). Factors associated with low birth weight include pregnancy in the very young (teens) and older women (over 35 years of age), immigrant women, cigarette smoking, high perceived stress, abuse, certain infections, substance use, previous preterm birth, low income, living alone, serious medical problems and poor foetal growth (Canadian Institute of Child Health, 1995).

Infants weighing less than 2,500 grams are categorized as low birth weight infants (LBW). Very low birth weight infants (VLBW) are those weighing less than 1,500 grams. Neonatal mortality rates are highest in the very low birth weight group (National Institute of Child Health & Human Development, 2003).

Preterm birth rates changed insignificantly in the 1980s from 6.3% in 1981 to 1983, but increased during the 1990s (7.0% in 1995 and 7.6% in 2000). In 2000, singleton births were responsible for over 80% of all preterm births. Compared to the national data published in by Health Canada in the Canadian Perinatal Health Report (2003), British Columbia's rate at 7.1% was below the Canadian average of 7.6%. Prince Edward Island, Nova Scotia, New Brunswick and Saskatchewan had lower preterm birth rates (Health Canada, 2003).

In BC for 2002/2003, the total low birth weight rate was 4.3% with 3.4% of infants weighing between 1,500 to 2,499 grams at birth and 0.7% of infants weighing less than 1,500 grams (Table 20A). This data is for singleton births only and does not include data on infants whose births occurred in Alberta hospitals. The overall LBW rate among the health authorities showed little variation. However, a number of Health Service Delivery Areas (HSDA) had rates higher than the provincial rate – Northern Interior (NI) 5.4%, Kootenay Boundary (KB) 4.9%, Thompson-Cariboo-Shuswap (TCS) 4.8%, Southern Vancouver Island (SVI) 4.8%, Vancouver (VANC) 4.7% and Richmond (RICH), Central Vancouver Island (CVI) and Northern Vancouver Island (NVI) reporting 4.4% (Table 20). The provincial rate for very low birth weight was less than 1%, consistent with the 2000/2001 and 2001/2002 figures.

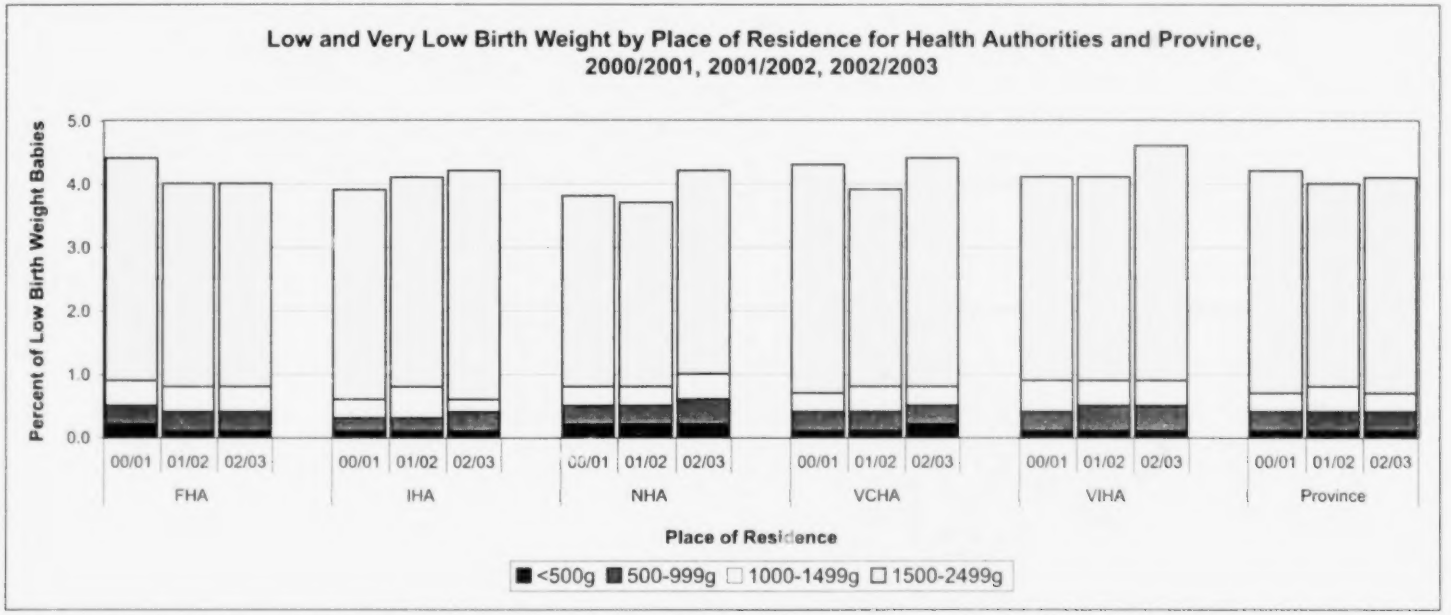
As stated by the Provincial Health Officer in the 2003 Review of Infant Mortality in British Columbia (Kendall, 2003), while "our rates for LBW compare favourably with other jurisdictions in Canada and parts of Europe, our rates are not as low as some European countries." The Provincial Health Officer also indicated that "a large proportion of the excess deaths were due to an increase in 2001 and 2002 in premature, low birth weight infants who are at very high risk." In subsequent reports, it would be important to review LBW for each HSDA by gestational age, maternal age as well as known at-risk factors such as smoking and maternal infection to provide information to stakeholders. Although multiple at-risk factors responsible for preterm birth are known, the lack of a clearly defined at-risk group is a public health challenge in the prevention of low birth weight, necessitating province-wide management from a population health perspective.

Table 20

Low and Very Low Birth Weight by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		FHA				IHA					NHA				VCHA				VIHA				BC UNSPEC	NON RES	Province
		FE	FN	FS	Total	EK	KB	OK	TCS	Total	NE	NI	NW	Total	NSCG	RICH	VANC	Total	CVI	NVI	SVI	Total			
		%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
<500 grams	00/01	0.0	0.2	0.2	**0.2**	0.2	0.0	0.1	0.1	**0.1**	0.7	0.1	0.0	**0.2**	0.0	0.3	0.2	**0.1**	0.0	0.2	0.2	**0.1**	0.0	0.8	0.1
	01/02	0.1	0.1	0.1	**0.1**	0.0	0.0	0.1	0.2	**0.1**	0.0	0.3	0.3	**0.2**	0.2	0.2	0.1	**0.1**	0.1	0.0	0.1	**0.1**	1.4	0.7	0.1
	02/03	0.1	0.1	0.2	**0.1**	0.2	0.0	0.1	0.1	**0.1**	0.1	0.2	0.3	**0.2**	0.2	0.3	0.2	**0.2**	0.1	0.2	0.0	**0.1**	0.0	0.0	0.1
500-999 grams	00/01	0.0	0.3	0.4	**0.3**	0.2	0.3	0.2	0.2	**0.2**	0.1	0.2	0.6	**0.3**	0.1	0.3	0.3	**0.3**	0.3	0.5	0.2	**0.3**	0.0	0.0	0.3
	01/02	0.2	0.3	0.4	**0.3**	0.2	0.0	0.2	0.2	**0.2**	0.0	0.3	0.4	**0.3**	0.1	0.2	0.3	**0.3**	0.3	0.7	0.3	**0.4**	1.4	4.0	0.3
	02/03	0.2	0.3	0.4	**0.3**	0.2	0.9	0.3	0.3	**0.3**	0.1	0.5	0.5	**0.4**	0.1	0.3	0.3	**0.3**	0.5	0.5	0.3	**0.4**	4.7	0.7	0.3
1000-1499 grams	00/01	0.5	0.3	0.4	**0.4**	0.0	0.2	0.2	0.5	**0.3**	0.1	0.4	0.5	**0.3**	0.2	0.2	0.3	**0.3**	0.4	0.8	0.4	**0.5**	0.0	2.3	0.3
	01/02	0.5	0.3	0.4	**0.4**	0.3	0.7	0.4	0.6	**0.5**	0.2	0.3	0.4	**0.3**	0.3	0.3	0.4	**0.4**	0.4	0.1	0.5	**0.4**	1.4	0.7	0.4
	02/03	0.2	0.4	0.4	**0.4**	0.0	0.4	0.2	0.3	**0.2**	0.2	0.6	0.1	**0.4**	0.2	0.1	0.3	**0.3**	0.5	0.4	0.4	**0.4**	2.3	1.3	0.3
1500-2499 grams	00/01	3.2	3.7	3.5	**3.5**	2.5	2.5	3.4	3.6	**3.3**	2.2	3.7	2.7	**3.0**	2.8	4.0	3.9	**3.6**	3.5	3.5	2.9	**3.2**	8.3	10.6	3.5
	01/02	3.1	3.0	3.5	**3.2**	2.6	3.4	3.0	3.8	**3.3**	3.4	2.8	2.7	**2.9**	2.8	2.7	3.3	**3.1**	3.2	2.7	3.3	**3.2**	4.2	3.3	3.2
	02/03	2.8	3.4	3.2	**3.2**	3.1	3.6	3.4	4.2	**3.6**	2.8	4.1	2.0	**3.2**	3.1	3.6	3.8	**3.6**	3.4	3.3	4.0	**3.7**	11.8	8.7	3.4
Total Low Birth Weight	00/01	3.7	4.5	4.4	**4.3**	2.8	2.8	4.0	4.4	**3.9**	3.2	4.3	3.8	**3.9**	3.2	4.7	4.7	**4.3**	4.2	5.0	3.8	**4.2**	8.3	13.6	4.2
	01/02	3.8	3.7	4.4	**4.1**	3.1	4.1	3.7	4.7	**4.0**	3.7	3.6	3.9	**3.7**	3.4	3.4	4.2	**3.9**	4.1	3.5	4.1	**4.0**	8.5	8.7	4.0
	02/03	3.4	4.1	4.2	**4.0**	3.4	4.9	3.9	4.8	**4.3**	3.2	5.4	2.9	**4.1**	3.6	4.4	4.7	**4.4**	4.4	4.4	4.8	**4.6**	18.8	8.7	4.3

Figure 13



Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Neonatal/Perinatal/Infant Mortality Rates by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002

(Refer to Table 21)

For 2001/2002 there were 39,267 singleton live births in BC, down slightly from 39,396 in 2000/2001. This report contains singleton pregnancies, deliveries, and births. Late terminations and multiple pregnancies are not included in the statistics precluding comparisons with other provincial and national rates.

Stillbirths

The definition of stillbirth is the birth of an infant > 500 gm or 20 weeks gestation who shows no sign of life at delivery (BC Vital Statistics Agency, 1998). The stillbirth rate is the total stillbirths per 1,000 total births (live births and stillbirths) in a given year. The risk factors associated with stillbirth include maternal smoking, low maternal education, maternal history of previous stillbirth, and male gender (Chen, Fair, Wilkins, Cyr & the Fetal and Infant Mortality Study Group of the Perinatal Surveillance System, 1998; Oyen, Skjaerven & Irgens, 1996).

There were 183 stillbirths in BC in 2001/2002, making the stillbirth rate 4.7. This is 0.5% lower than the previous year (2000/2001) when the stillbirth rate was 5.2. For the Health Authorities for 2001/2002, the stillbirth rate ranged from 2.7 Interior Health Authority (IHA) to 7.3 Northern Health Authority (NHA), and for the Health Service Delivery Areas the rate ranged from 1.0 North Vancouver Island (NVI) to 9.1 Northwest (NW). It is apparent that for 2001/2002 the NHA had the highest stillbirth rate of 7.3 well above the provincial average of 4.7, or alternatively, 8.7% of the total births in BC and 13.7% of the total stillbirths.

Infant Mortality

Infant mortality has been considered the single most comprehensive measure of health in a society (CIHI, 2003). According to the Canadian Perinatal Health Report (Health Canada, 2003), infant mortality can be divided into three components: early neonatal deaths (0-6 days), late neonatal deaths (7-27 days) and postneonatal deaths (28-364 days). Total neonatal deaths include both early and late neonatal deaths and total infant deaths include total neonatal deaths and postneonatal deaths. For definitions of mortality rates, please refer to Table 21.

There were 103 total neonatal deaths in BC in 2001/2002, giving a provincial neonatal mortality rate of 2.6, compared to 2.3 in 2000/2001. For the Health Authorities for 2001/2002, the neonatal mortality rate ranged from 2.2 Interior Health Authority (IHA) to 3.6 Northern Health Authority (NHA), and for the Health Service Delivery Areas the rate ranged from 0.0 East Kootenay (EK) to 6.2 Northwest (NW).

There were 150 total infant deaths in BC in 2001/2002, giving a provincial infant death rate of 3.8, compared with 3.4 in 2000/2001. For the Health Authorities for 2001/2002, the infant death rate ranged from 3.3 Vancouver Coastal Health Authority (VCHA) to 4.4 (NHA), and for the Health Service Delivery Areas the rate ranged from 0.0 (EK) to 6.2 (NW).

Perinatal Mortality

The perinatal mortality rate includes total stillbirths and early neonatal deaths per 1,000 total births. The perinatal mortality rate in BC in 2001/2002 was 6.9, compared with 7.0 in 2000/2001. For the Health Authorities for 2001/2002, the perinatal mortality rate ranged from 4.5 (IHA) to 10.3 (NHA), and for the Health Service Delivery Areas the rate ranged from 1.6 (EK) to 14.2 (NW).

It is apparent from the two years of data that the provincial stillbirth rate and perinatal mortality rate have decreased from 2000/2001 to 2001/2002. However, the provincial neonatal mortality rate and infant death rate have increased over the same time period. The newborn survival rate has decreased slightly from 997.7 (2000/2001) to 997.4 (2001/2002). It is also apparent that the Northern Health Authority (NHA) has the highest rates of stillbirth, neonatal mortality, perinatal mortality, and infant death compared to all other Health Authorities, and subsequently a neonatal survival rate of 996.4. These findings are concerning especially since the mortality rates for the NHA were consistent with the provincial rates for 2000/2001.

Table 21

Neonatal/Perinatal/Infant Mortality by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002

		2000/2001												
HA	HSDA	Total Birth	Total Still Birth	Total Death	Total Live Birth	Still Birth Rate	END	LND	TND	PND	NMR	PMR	IDR	NSR
FHA	FE	2735	8	4	2727	2.9	2	1	3	1	1.1	3.7	1.5	998.9
	FN	5465	33	17	5432	6.0	10	2	12	5	2.2	7.9	3.1	997.8
	FS	6738	43	28	6695	6.4	15	4	19	9	2.8	8.6	4.2	997.2
Total		14938	84	49	14854	5.6	27	7	34	15	2.3	7.4	3.3	997.7
IHA	EK	648	2	3	646	3.1	2	0	2	1	3.1	6.2	4.6	996.9
	KB	601	2	1	599	3.3	0	1	1	0	1.7	3.3	1.7	998.3
	OK	2560	14	8	2546	5.5	3	2	5	3	2.0	6.6	3.1	998.0
	TCS	1849	9	7	1840	4.9	2	1	3	4	1.6	5.9	3.8	998.4
Total		5658	27	19	5631	4.8	7	4	11	8	2.0	6.0	3.4	998.0
NHA	NE	816	8	3	808	9.8	2	0	2	1	2.5	12.3	3.7	997.5
	NI	1594	4	6	1590	2.5	3	0	3	3	1.9	4.4	3.8	998.1
	NW	1033	6	3	1027	5.8	2	1	3	0	2.9	7.7	2.9	997.1
Total		3443	18	12	3425	5.2	7	1	8	4	2.3	7.3	3.5	997.7
VCHA	NSCG	2377	10	3	2367	4.2	2	0	2	1	0.8	5.0	1.3	999.2
	RICH	1550	7	10	1543	4.5	9	0	9	1	5.8	10.3	6.5	994.2
	VANC	5745	27	13	5718	4.7	9	2	11	2	1.9	6.3	2.3	998.1
Total		9672	44	26	9628	4.5	20	2	22	4	2.3	6.6	2.7	997.7
VIHA	CVI	1877	12	8	1865	6.4	4	1	5	3	2.7	8.5	4.3	997.3
	NVI	1016	7	6	1009	6.9	3	1	4	2	4.0	9.8	5.9	996.0
	SVI	2612	9	11	2603	3.4	3	4	7	4	2.7	4.6	4.2	997.3
Total		5505	28	25	5477	5.1	10	5	16	9	2.9	6.9	4.5	997.1
BC UNSPEC		48	1	1	47	20.8	0	1	1	0	21.3	20.8	21.3	978.7
NON RES		132	2	0	130	15.2	0	0	0	0	0.0	15.2	0.0	1000.0
Total		39396	204	132	39192	5.2	71	21	92	40	2.3	7.0	3.4	997.7

		2001/2002												
HA	HSDA	Total Birth	Total Still Birth	Total Death	Total Live Birth	Still Birth Rate	END	LND	TND	PND	NMR	PMR	IDR	NSR
FHA	FE	2875	8	17	2867	2.8	6	4	10	7	3.5	4.9	5.9	996.5
	FN	5467	32	14	5435	5.9	6	3	9	5	1.7	7.0	2.6	998.3
	FS	6761	39	29	6722	5.8	16	2	18	11	2.7	8.1	4.3	997.3
Total		15103	79	60	15024	5.2	28	9	37	23	2.5	7.1	4.0	997.5
IHA	EK	608	1	0	607	1.6	0	0	0	0	0.0	1.6	0.0	1000.0
	KB	592	3	2	589	5.1	0	1	1	1	1.7	5.1	3.4	998.3
	OK	2505	6	7	2499	2.4	4	0	4	3	1.6	4.0	2.8	998.4
	TCS	1808	5	10	1803	2.8	6	1	7	3	3.9	6.1	5.5	996.1
Total		5513	15	19	5498	2.7	10	2	12	7	2.2	4.5	3.4	997.8
NHA	NE	843	3	1	840	3.6	1	0	1	0	1.2	4.7	1.2	998.8
	NI	1576	13	8	1563	8.2	4	1	5	3	3.2	10.8	5.1	996.8
	NW	984	9	6	975	9.1	5	1	6	0	6.2	14.2	6.2	993.8
Total		3403	25	15	3378	7.3	10	2	12	3	3.6	10.3	4.4	996.4
VCHA	NSCG	2191	13	9	2178	5.9	6	3	9	0	4.1	8.7	4.1	995.9
	RICH	1538	8	4	1530	5.2	4	0	4	0	2.6	7.8	2.6	997.4
	VANC	5623	20	18	5603	3.6	12	0	12	6	2.1	5.5	3.2	997.9
Total		9352	41	31	9311	4.4	22	3	25	6	2.7	6.7	3.3	997.3
VIHA	CVI	1950	12	7	1938	6.2	3	1	4	3	2.1	7.7	3.6	997.9
	NVI	996	1	5	995	1.0	3	0	3	2	3.0	4.0	5.0	997.0
	SVI	2729	8	10	2721	2.9	7	0	7	3	2.6	5.5	3.7	997.4
Total		5675	21	22	5654	3.7	13	1	14	8	2.5	6.0	3.9	997.5
BC UNSPEC		71	0	1	71	0.0	1	0	1	0	14.1	14.1	14.1	985.9
NON RES		150	2	2	148	13.3	2	0	2	0	13.5	26.7	13.5	986.5
Total		39267	183	150	39084	4.7	86	17	103	47	2.6	6.9	3.8	997.4

Note: Late Terminations are excluded. Death information is supplemented by BC Vital Statistics Agency

END - Early Neonatal Deaths (< 7 days)
LND - Late Neonatal Deaths (7-27 days)
TND - Total Neonatal Deaths (<28 days)
PND - Post Neonatal Deaths (28 - 364 days)
NMR - Neonatal Mortality Rate
PMR - Perinatal Mortality Rate
IDR - Infant Death Rate
NSR - Neonatal Survival Rate
Stillbirth Rate = (Total StillBirths / Total Births) X 1000
Neonatal Mortality Rate = (Total Neonatal Deaths / Live Births) X 1000
Perinatal Mortality Rate = ((Total StillBirths + Total Early Neonatal Deaths) / Total Births) X 1000
Infant Death Rate = ((Total Neonatal Deaths + Post Neonatal Deaths) / Total Live Births) X 1000
Neonatal Survival Rate = ((Total Live Births - Total Neonatal Deaths) / Total Live Births) X 1000

Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Neonatal/Perinatal/Infant Mortality Rates by Maternal Age, 2000/2001, 2001/2002

Stillbirth

The stillbirth rate was highest at the two extremes of childbearing age (< 15 years of age and > 40 years of age). These groups also have the lowest number of births, so the higher stillbirth rates reflect the smaller number of births. Please refer to Table 22 (Neonatal/Perinatal Infant Mortality by Maternal Age, 2000/2001, 2001/2002).

Infant Mortality

For 2000/2001, the highest infant mortality rate was in the 20-24 year age group. For 2001/2002, the highest infant mortality rate was in the 15-19 year age group, which increased from a rate of 3.9 in 2000/2001 to 10.4 in 2001/2002. The rate was also high in the 45-49 age group for 2001/2002, but again the number of births in this group is very small. Please refer to Table 22 (Neonatal/Perinatal Infant Mortality by Maternal Age, 2000/2001, 2001/2002).

Perinatal Mortality

In 2000/2001, the highest perinatal mortality rate was in the <15 age group. For 2001/2002, the 15-19 year age group had the highest perinatal mortality rate, next to the 45-49 age group where the number of births was very small. Please refer to Table 22 (Neonatal/Perinatal Infant Mortality by Maternal Age, 2000/2001, 2001/2002).

Table 22 **Neonatal/Perinatal/Infant Mortality by Maternal Age, 2000/2001, 2001/2002**

	2000/2001												
Age	Total Birth	Total Still Birth	Total Death	Total Live Birth	Still Birth Rate	END	LND	TND	PND	NMR	PMR	IDR	NSR
<15	14	1	0	13	71.4	0	0	0	0	0.0	71.4	0.0	1000.0
15-19	1807	9	7	1798	5.0	3	0	3	4	1.7	6.6	3.9	998.3
20-24	6272	29	31	6243	4.6	16	3	19	12	3.0	7.2	5.0	997.0
25-29	11548	54	39	11494	4.7	21	5	26	13	2.3	6.5	3.4	997.7
30-34	12208	63	34	12145	5.2	20	7	27	7	2.2	6.8	2.8	997.8
35-39	6355	37	17	6318	5.8	8	5	13	4	2.1	7.1	2.7	997.9
40-44	1154	11	4	1143	9.5	3	1	4	0	3.5	12.1	3.5	996.5
45-49	37	0	0	37	0.0	0	0	0	0	0.0	0.0	0.0	1000.0
>=50	1	0	0	1	0.0	0	0	0	0	0.0	0.0	0.0	1000.0
Total	**39396**	**204**	**132**	**39192**	**5.2**	**71**	**21**	**92**	**40**	**2.3**	**7.0**	**3.4**	**997.7**

	2001/2002												
Age	Total Birth	Total Still Birth	Total Death	Total Live Birth	Still Birth Rate	END	LND	TND	PND	NMR	PMR	IDR	NSR
<15	15	0	0	15	0.0	0	0	0	0	0.0	0.0	0.0	1000.0
15-19	1744	14	18	1730	8.0	11	1	12	6	6.9	14.3	10.4	993.1
20-24	6133	29	25	6104	4.7	15	0	15	10	2.5	7.2	4.1	997.5
25-29	11247	44	39	11203	3.9	21	6	27	12	2.4	5.8	3.5	997.6
30-34	12458	53	40	12405	4.3	20	5	25	15	2.0	5.9	3.2	998.0
35-39	6403	34	23	6369	5.3	15	4	19	4	3.0	7.7	3.6	997.0
40-44	1232	8	4	1224	6.5	3	1	4	0	3.3	8.9	3.3	996.7
45-49	34	1	1	33	29.4	1	0	1	0	30.3	58.8	30.3	969.7
>=50	1	0	0	1	0.0	0	0	0	0	0.0	0.0	0.0	1000.0
Total	**39267**	**183**	**150**	**39084**	**4.7**	**88**	**17**	**103**	**47**	**2.6**	**6.9**	**3.8**	**997.4**

Note: Late Terminations are excluded. Death information is supplemented by BC Vital Statistics Agency

END - Early Neonatal Deaths (< 7 days)
LND - Late Neonatal Deaths (7-27 days)
TND - Total Neonatal Deaths (<28 days)
PND - Post Neonatal Deaths (28 - 364 days)
NMR - Neonatal Mortality Rate
PMR - Perinatal Mortality Rate
IDR - Infant Death Rate
NSR - Neonatal Survival Rate

Stillbirth Rate = (Total StillBirths / Total Births) X 1000
Neonatal Mortality Rate = (Total Neonatal Deaths / Live Births) X 1000
Perinatal Mortality Rate =
((Total StillBirths + Total Early Neonatal Deaths) / Total Births) X 1000
Infant Death Rate =
((Total Neonatal Deaths + Post Neonatal Deaths) / Total Live Births) X 1000
Neonatal Survival Rate =
((Total Live Births - Total Neonatal Deaths) / Total Live Births) X 1000

Neonatal/Perinatal/Infant Mortality Rates by Birth Weight, 2000/2001, 2001/2002

Stillbirth

As expected, the stillbirth rate was highest in the extremely low birth weight infant < 500 grams and 500-999 grams, but the rates decreased in both of these groups in 2001/2002 compared to 2000/2001. Please refer to Table 23 (Neonatal/Perinatal/Infant Mortality by Birth Weight 2000/2001, 2001/2002).

Infant Mortality

As expected, the infant mortality rates reflect a negative correlation – the rates were highest in the extremely low birth weight groups and lowest with increased birth weight. Please refer to Table 23 (Neonatal/Perinatal/Infant Mortality by Birth Weight 2000/2001, 2001/2002).

Perinatal Mortality

As expected, the perinatal mortality rates reflect a negative correlation – the rates were highest in the extremely low birth weight groups and lowest with increased birth weight. Please refer to Table 23 (Neonatal/Perinatal/Infant Mortality by Birth Weight 2000/2001, 2001/2002).

Table 23 **Neonatal/Perinatal/Infant Mortality by Birth Weight, 2000/2001, 2001/2002**

	2000/2001												
Birth Weight	Total Birth	Total Still Birth	Total Death	Total Live Birth	Still Birth Rate	END	LND	TND	PND	NMR	PMR	IDR	NSR
<500	58	37	20	21	637.9	20	0	20	0	952.4	982.8	952.4	47.6
500-999	114	34	32	80	298.2	24	5	29	3	362.5	508.8	400.0	637.5
1000-1499	137	17	8	120	124.1	6	1	7	1	58.3	167.9	66.7	941.7
1500-2499	1381	36	20	1325	26.5	7	6	13	7	9.8	31.6	15.1	990.2
2500-3499	18902	33	33	18869	1.7	8	5	13	20	0.7	2.2	1.7	999.3
3500-4499	17789	15	16	17774	0.8	3	4	7	9	0.4	1.0	0.9	999.6
>=4500	998	1	0	997	1.0	0	0	0	0	0.0	0.0	0.0	1000.0
Unknown	37	31	3	6	837.8	3	0	3	0	500.0	918.9	500.0	500.0
Total	**39396**	**204**	**132**	**39192**	**5.2**	**71**	**21**	**92**	**40**	**2.3**	**7.0**	**3.4**	**997.7**

	2001/2002												
Birth Weight	Total Birth	Total Still Birth	Total Death	Total Live Birth	Still Birth Rate	END	LND	TND	PND	NMR	PMR	IDR	NSR
<500	49	21	26	28	428.6	26	0	26	0	928.6	959.2	928.6	71.4
500-999	120	21	31	99	175.0	28	1	29	2	292.9	408.3	313.1	707.1
1000-1499	151	15	9	136	99.3	6	0	6	3	44.1	139.1	66.2	955.9
1500-2499	1247	32	14	1215	25.7	2	5	7	7	5.8	27.3	11.5	994.2
2500-3499	18844	36	43	18808	1.9	11	7	18	25	1.0	2.5	2.3	999.0
3500-4499	17808	17	15	17791	1.0	3	3	6	9	0.3	1.1	0.8	999.7
>=4500	997	2	4	995	2.0	2	1	3	1	3.0	4.0	4.0	997.0
Unknown	51	39	8	12	764.7	8	0	8	0	666.7	921.6	666.7	333.3
Total	**39267**	**183**	**150**	**39084**	**4.7**	**86**	**17**	**103**	**47**	**2.6**	**6.9**	**3.8**	**997.4**

Note: Late Terminations are excluded. Death information is supplemented by BC Vital Statistics Agency

END - Early Neonatal Deaths (< 7 days)
LND - Late Neonatal Deaths (7-27 days)
TND - Total Neonatal Deaths (<28 days)
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NMR - Neonatal Mortality Rate
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Stillbirth Rate = (Total StillBirths / Total Births) X 1000
Neonatal Mortality Rate = (Total Neonatal Deaths / Live Births) X 1000
Perinatal Mortality Rate =
((Total StillBirths + Total Early Neonatal Deaths) / Total Births) X 1000
Infant Death Rate =
((Total Neonatal Deaths + Post Neonatal Deaths) / Total Live Births) X 1000
Neonatal Survival Rate =
((Total Live Births - Total Neonatal Deaths) / Total Live Births) X 1000

SECTION IV

IN FOCUS - CAESAREAN SECTION

SECTION IV
IN FOCUS - Caesarean Section

Caesarean Section is a procedure used to deliver a foetus from the womb when the alternative of vaginal delivery is less safe for either the mother or the babe. Reasons for C-Section include dystocia, foetal distress, malpresentation, breech presentation, placenta previa, abruptio placenta and maternal hypertension. Other factors can include high pre-pregnancy maternal weight and multiple babies. The use of Caesarean Section for the delivery of a pregnant woman in British Columbia has become more prevalent in the last forty years. Table 24[5] shows the caesarean section rate has risen from 4% of all live births in 1965 to 28% in 2003 (BC Vital Statistics Agency, 2003). The BC experience is not dissimilar to experience elsewhere in Canada and in the western world generally.

The present (2002/2003) C-Section rates in the BC Health Authorities (HAs) and their Health Service Delivery Areas (HSDAs) are shown in Table 17A. No health authority has a rate below 25%, considered by place of delivery.

Within BC, the C-Section rates vary by Health Authority and by Health Service Delivery Area, as well as over time (Figure 14 and 15). Figure 14 shows that all Health Authorities except the Provincial Health Services Authority (PHSA - BC Children's and Women's Health Centre) have increased C-Section rates over the past three years. (These data apply to the place of delivery, not the place of residence). Rates vary in 2002/2003 from 29% in Vancouver Island Health Authority (VIHA) to 26% in the Fraser Health Authority (FHA). At the HSDA level, the variation is greater, as would be expected, from 32.3% in South Vancouver Island (SVI) to 24.6 in the North East (NE) (Figure 15). As the data exclude deliveries of BC residents in out-of-province hospitals, there is a slight undercount for Interior Health Authority (IHA) and Northern Health Authority (NHA), each of which has an HSDA that borders Alberta.

While C-Section rates in smaller hospitals may be the result of the practices of particular physicians, this is unlikely to lie behind changes at the HSDA level, as each HSDA has multiple hospitals with (usually) multiple providers providing perinatal care. This change in the proportion of pregnancies delivered by C-Section has been noted and extensively discussed, both in the scienti.c literature and as a public policy issue (Anderson & Lomas, 1984; Best Practice, 2001). Much of the literature has addressed the rising rates as a problem and numerous task forces and consensus conferences have looked at the matter because of concerns over the rise (CMAJ, 1986; NIH, 1981; WHO, 1985). The reasons for viewing the rising rates with concern stem from a number of sources: similar health outcomes for mother and child can be achieved without the use of C-Sections; the higher cost of these procedures; the general suspicion with which many medical interventions are viewed; and a speci.c emphasis on birth as a natural process that needs minimal assistance. In line with these policy directions, many hospitals and now health authorities in BC have made concerted attempts to either reduce or to stop the rise in C-Section rates. None have been particularly successful for any length of time: rates have been rising in all parts of the province over the same time-period (BC Ministry of Health, 1993). A commonly asked question is why the rates are rising – is it because the medical reasons for the intervention are increasing; the demographics of the mothers is changing or is it due to perceptions of risk on the part of the mother and/or the health professionals providing care?

A review of the types of delivery over time (Table 24 and Figure 16) shows that the proportion of births by Spontaneous Delivery has varied from around 70% in the mid 1960s, around 65% in the 1980s rising to 68-69% in the late 90s (possibly due to a rise in vaginal birth after C-section - VBACs) and a sharper drop to 61% in 2003. As noted above, the change in C-Section rates over the same time period has been much more marked. This increase has been paralleled by a decrease in other interventional forms of delivery such as forceps and vacuum-assisted. The combined intervention rate has, with three exceptions, remained between 30 – 35% for the years 1965 – 2001. In other words, the extent of medical intervention in childbirth changed little over the period, but the type of intervention moved from the use of forceps and vacuum as methods of assisting delivery to the use of C-Sections. If it is assumed that the proportion of births requiring assistance has not changed greatly (a large assumption – see discussion below re the characteristics of mothers), then this consistent intervention rate can be understood, not as the increased medicalization of maternal care, but the adoption of different methods of assistance.

Maternal Characteristics

Compared to 40 years ago, women are having their children later in life. Maternal age in BC has been changing (Figure 17). In 1990, a little over 10% of mothers delivering were aged 35 or older; in 2003, over 20% were in this age group. Maternal age is associated with increased rates of hypertension and higher chances of dystocia. Another factor (not analyzed here) is that pre-pregnancy weight has been increasing, and this, like higher maternal age, is associated with an increased likelihood of a labour requiring intervention.

[5] Note that the main part of this Report deals with singleton births only. The Table referred to here is based on total births, so will be somewhat different from those in the body of the report. Numbers will also vary according to whether the source includes or excludes Home Births, in province deliveries or out of province mothers and out of province deliveries of BC Residents.

The increased use of InVitro Fertilization (IVF) has also had a (relatively small) effect on C-Section rates. IVF pregnancies are more likely to have multiple foetuses and hence complications requiring intervention. (The effect of this change is more noticeable on the use of Neonatal Intensive Care Units, due to the low birth weight of babes from multiple births.)

A study carried out using data from the Reproductive Care Program of Nova Scotia's Atlee Database, demonstrated that the changes in primary C-Sections over that time period (13.4% of deliveries in 1988 to 17.5% in 2000) could be accounted for largely by changes in maternal characteristics and partly by changes in obstetrical practice (Joseph et al., 2003). Changes in maternal age accounted for 21% of the change in C-Sections, with parity, pre-pregnancy weight and weight gain during pregnancy accounting for the remainder. Changes in obstetrical practice associated with these maternal changes included more frequent use of epidurals and term inductions, the latter offsetting a reduction in post-term inductions. Forceps use (mid and low) declined throughout the period, reflecting the findings of the BC data. There was little change in maternal conditions or diseases over the time period.

Practice Characteristics

Over time, C-Sections have become very safe for the mother, and safer than other methods, such as forceps, for the baby (American College of Obstetricians and Gynecologists, 1994). The use of spinal anaesthesia during labour and for C-Section deliveries has reduced the risks of general anaesthesia. Also, a higher proportion of births now occur in larger facilities that have the ability to provide C-Sections quickly. A further possible underlying reason for the changing rates may lie in the improved ability to diagnose problems earlier in the labour or before labour onset. Diagnostic ultrasound and biochemical tests allow a more precise determination of foetal age and growth, and hence the detection of intra-uterine growth restriction, low levels of amniotic fluid, etc. Thirty years ago, these tests were either not available or less precise. However, as the overall intervention rate has changed little over the same time period, this would appear to have had little effect – although it may well have influenced the timing of intervention. For example, if a problem that carries a higher risk to the foetus or mother is detected before labour starts, then an elective C-Section may be done whereas in earlier years, any intervention would have been done on an emergency basis during labour.

Evidence from research has also changed clinical practice. A good example is the study of outcomes for term breech deliveries by Hannah and her colleagues, demonstrating improved foetal outcomes in the group delivered by C-Section compared to vaginal delivery (Hannah, Hannah, Hewson, Hodnett, Saigal & Willan, 2000). An analysis of patterns of C-Section carried out by the Maternal Health Study Group of the Canadian Perinatal Surveillance System (in press) looked at C-Sections in all of Canada except Quebec and Manitoba. The finding in the paper was that most of the increases in C-Sections over the time period 1994/1995 to 2000/2001 could be attributed to increases in primary caesarean delivery for dystocia and elective repeat caesarean deliveries. This is compatible with increasing maternal age and with a decrease in VBACs.

Other considerations

Has the increase in C-Sections been associated with a change in the indicators of infant health? Using a parallel set of trend statistics, it is worth noting that, over the same time period as C-Section rates have been rising, the Infant Mortality rate (IMR) in BC has dropped from 20.3 deaths per 1000 live births in 1965 to 4.1 in 2003, and the neonatal death rate (under 28 days) from 13.5 to 2.9. No causality can be inferred from this association, but at least it can be said that the change in C-Section rates has not been associated with a worsening in the trend of one of the commonest indexes of maternal/child health (BC Vital Statistics Agency, 2003).

Does the change in C-Section rates affect costs? - The hospital costs of a C-Section versus a normal vaginal delivery are about 7:4 (Table 25) – i.e. a C-Section (CMG 604) costs 75% more than a vaginal delivery (CMG 611). The majority of this difference will be due to the costs of the operating room and equipment and the longer length of stay of the mother and babe after C-Section. By contrast, the cost of a successful VBAC is virtually the same as that of a normal vaginal delivery. The comparison is, however, a little more complicated. As noted above, the change in C-Section rates has been accompanied by a reciprocal drop in other types of intervention in deliveries. A complicated vaginal delivery has a higher cost than an uncomplicated one. Compared to these types of delivery, a C-Section (CMG 604) is a little over a third more expensive (CMG 606-609). Further, a repeat C-Section (CMG 603) (about 34% of all C-Sections are repeat) costs only 5% more than a complicated vaginal delivery (CMG 606-609). Thus, while on average a C-Section delivery is 75% more expensive than a vaginal delivery, if the comparison is between the costs of one form of intervention and another, the increase in costs is about 45% [6].

[6] Note that these costs exclude physician fees and any costs to the patient of the greater morbidity associated with C-Sections. Comparisons of the costs of physician services are complicated by the nature of the Fee Schedule and have not been attempted in this report.

These comparisons of costs are high level, but clearly show that C-Sections are more expensive. The question is whether the benefits resulting offset the higher costs. This is not a question that can be answered simply. As noted above, indicators of infant mortality show that there are associated benefits, but these indicators are not noticeably better in HSDAs with higher C-Section rates, so causality is not clear. Non-economic benefits may include greater certainty, avoidance of the pain and stress of labour, and avoidance of possible legal actions[7].

Recent Trends

The trend over the last four years (1999 - 2003) shows a new association between decreasing vaginal and increasing C-Section deliveries, with other forms of intervention at delivery remaining static. This cannot be accounted for by changes in maternal age, and it remains to be seen if this reciprocal change will be maintained in years to come. A recent report in the Nova Scotia RCP Newsletter (Reproductive Care Program of Nova Scotia, 2004) suggested that a similar finding in that province might be the result of decreased use of VBAC – from 50% in 1999 to 25% in 2002. Why this has occurred is not clear, but there has been some focus on the morbidity and mortality associated with uterine rupture – a rare but not negligible complication of VBACs. There has also been recent literature on the effects of normal pregnancy on the pelvic organs – i.e. increased research on the risks and consequences of vaginal delivery (Dietz & Bennett, 2003).

A (relatively) new policy issue relates to the delivery of a baby by C-Section in the absence of medical indications for this (SOGC, 2004; Nygard & Cruickshank, 2003). Many indications for C-Section are relative, not clear-cut. The diagnosis of dystocia and failure to progress in labour varies between physicians and facilities. The extent to which a pregnant woman who has had a previous C-Section is encouraged to attempt a vaginal delivery also varies, as does the attitude of the woman herself (and her family). So there is plenty of scope for different decision-making in different settings and circumstances. But beyond these types of examples, there are some women and some providers who believe that if a woman wants to have a C-Section, this should be available to them, regardless of medical indications.

Among the issues are:

- Informing the woman and her family so that any decision she makes is fully informed as to risks
- Whether performing a procedure for these reasons is ethically justified
- Whether, if it was agreed that the procedure was appropriate, it should be covered under publicly funded health insurance, given that it is more costly than the alternative and that it is not, by definition, "medically necessary".

This issue will not be resolved in the short term, but if C-Section rates continue to rise in line with the past 40 years, it is unlikely to disappear.

[7] In the Report of the C/Section Task Force, it is noted that CMPA (Canadian Medical Protective Association) informed the Task Force that 96% of suits involving C-Sections related to failure to perform one, or failure to perform one quickly enough.

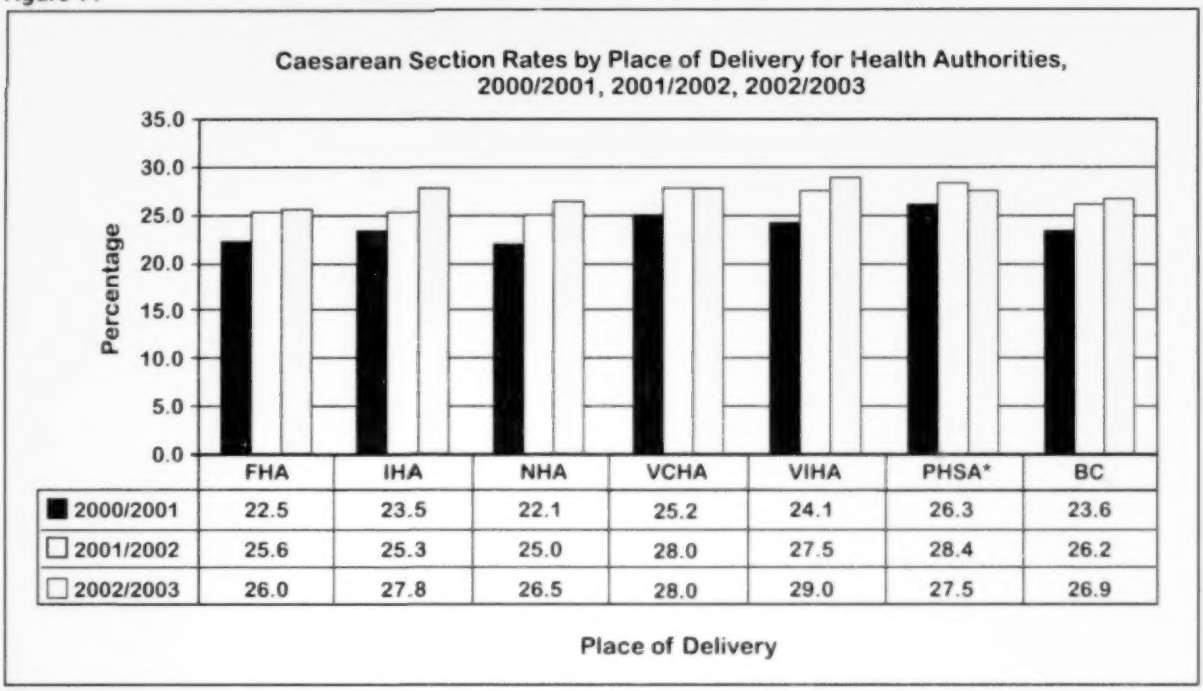
Table 24

BIRTHS IN BRITISH COLUMBIA BY TYPE OF DELIVERY 1965 - 2003

YEAR	SPONTANEOUS		CAESARIAN SECTIONS						FORCEPS, BREECH & NOT SPECIFIED		TOTAL
			FIRST		SECOND		TOTAL				
	Number	%	Number	%	Number	%	Number	%		%	Number
1965	23,421	69%	898	3%	610	2%	1,508	4%	9,242	27%	34,171
1966	23,134	70%	906	3%	544	2%	1,450	4%	8,424	26%	33,008
1967	23,456	70%	1,031	3%	578	2%	1,609	5%	8,361	25%	33,426
1968	24,222	71%	1,144	3%	635	2%	1,779	5%	8,239	24%	34,240
1969	25,697	72%	1,396	4%	730	2%	2,126	6%	8,114	23%	35,937
1970	26,263	70%	1,726	5%	815	2%	2,541	7%	8,566	23%	37,370
1971	24,832	70%	1,792	5%	851	2%	2,643	7%	7,938	22%	35,413
1972	24,359	70%	1,993	6%	963	3%	2,956	8%	7,633	22%	34,948
1973	24,359	69%	2,162	6%	1,015	3%	3,177	9%	7,647	22%	34,689
1974	24,359	68%	2,460	7%	1,282	4%	3,742	10%	7,702	21%	35,903
1975	24,359	67%	2,671	7%	1,437	4%	4,108	11%	7,911	22%	36,642
1976	24,359	67%	3,026	8%	1,636	5%	4,662	13%	7,139	20%	36,266
1977	24,359	66%	3,409	9%	1,711	5%	5,120	14%	7,236	20%	36,882
1978	24,359	65%	3,863	10%	1,991	5%	5,854	16%	7,222	19%	37,412
1979	24,359	66%	3,967	10%	2,308	6%	6,275	16%	6,989	18%	38,639
1980	24,359	65%	4,407	11%	2,638	7%	7,045	17%	6,924	17%	40,455
1981	24,359	65%	4,792	11%	2,863	7%	7,655	18%	6,941	17%	42,016
1982	24,359	66%	4,881	11%	3,179	7%	8,060	19%	6,668	15%	43,239
1983	24,359	66%	4,897	11%	3,375	8%	8,272	19%	6,355	15%	43,292
1984	24,359	66%	5,224	12%	3,666	8%	8,890	20%	5,989	14%	44,099
1985	24,359	66%	5,235	12%	3,677	8%	8,912	21%	5,850	14%	43,282
1986	24,359	66%	5,089	12%	3,727	9%	8,816	21%	5,491	13%	42,168
1987	24,359	66%	5,177	12%	3,626	9%	8,803	21%	5,619	13%	41,950
1988	24,359	65%	5,438	13%	3,829	9%	9,267	21%	5,640	13%	43,206
1989	24,359	64%	5,869	13%	3,789	9%	9,658	22%	5,972	14%	43,866
1990	24,359	65%	6,092	13%	3,865	9%	9,957	22%	5,950	13%	45,333
1991	24,359	66%	5,849	13%	3,859	9%	9,708	21%	5,544	12%	45,312
1992	24,359	66%	5,702	12%	3,886	9%	9,588	21%	5,793	13%	45,710
1993	24,359	68%	5,780	13%	3,781	8%	9,561	21%	5,332	12%	45,989
1994	24,359	69%	5,733	12%	3,548	8%	9,281	20%	5,240	11%	46,924
1995	24,359	68%	5,889	13%	3,399	7%	9,288	20%	5,474	12%	46,762
1996	24,359	69%	6,028	13%	3,393	7%	9,421	21%	4,653	10%	45,883
1997	24,359	69%	5,742	13%	3,334	8%	9,076	20%	4,603	10%	44,371
1998	24,359	69%	5,828	14%	3,211	7%	9,039	21%	4,420	10%	42,909
1999	24,359	65%	5,895	14%	3,387	8%	9,282	22%	5,124	12%	41,739
2000	24,359	68%	6,055	15%	3,344	8%	9,399	23%	4,953	12%	40,467
2001	24,359	65%	6,851	17%	3,653	9%	10,504	26%	4,622	11%	40,376
2002	24,359	63%	7,196	18%	3,948	10%	11,144	28%	4,345	11%	39,893
2003	24,359	61%	7,280	18%	4,087	10%	11,367	28%	4,362	11%	40,285

Source : BC Vital Statistics Agency

Figure 14

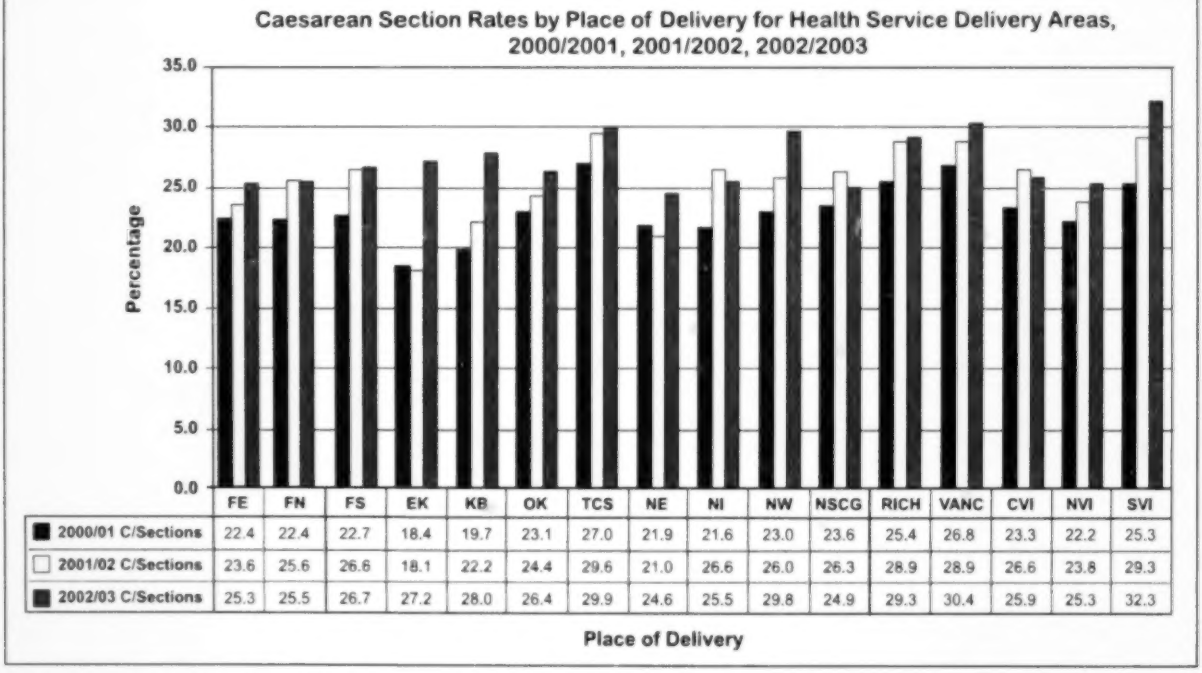


	FHA	IHA	NHA	VCHA	VIHA	PHSA*	BC
2000/2001	22.5	23.5	22.1	25.2	24.1	26.3	23.6
2001/2002	25.6	25.3	25.0	28.0	27.5	28.4	26.2
2002/2003	26.0	27.8	26.5	28.0	29.0	27.5	26.9

*PHSA - refers to BC Women's Hospital patients only

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Figure 15



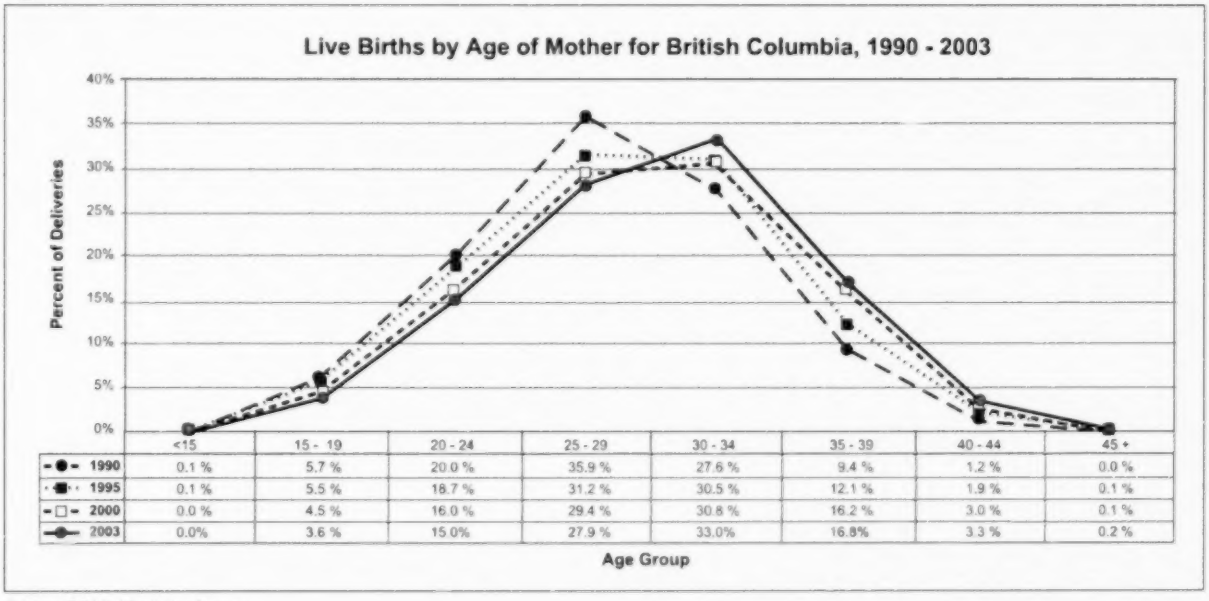
	FE	FN	FS	EK	KB	OK	TCS	NE	NI	NW	NSCG	RICH	VANC	CVI	NVI	SVI
2000/01 C/Sections	22.4	22.4	22.7	18.4	19.7	23.1	27.0	21.9	21.6	23.0	23.6	25.4	26.8	23.3	22.2	25.3
2001/02 C/Sections	23.6	25.6	26.6	18.1	22.2	24.4	29.6	21.0	26.6	26.0	26.3	28.9	28.9	26.6	23.8	29.3
2002/03 C/Sections	25.3	25.5	26.7	27.2	28.0	26.4	29.9	24.6	25.5	29.8	24.9	29.3	30.4	25.9	25.3	32.3

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Figure 16

Source: BC Vital Statistics Agency

Figure 17



	<15	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 +
1990	0.1 %	5.7 %	20.0 %	35.9 %	27.6 %	9.4 %	1.2 %	0.0 %
1995	0.1 %	5.5 %	18.7 %	31.2 %	30.5 %	12.1 %	1.9 %	0.1 %
2000	0.0 %	4.5 %	16.0 %	29.4 %	30.8 %	16.2 %	3.0 %	0.1 %
2003	0.0%	3.6 %	15.0%	27.9 %	33.0%	16.8%	3.3 %	0.2 %

Source: BC Vital Statistics Agency

Table 25

Cost of Delivery in Hospital in British Columbia, 2002/2003

CMG	Description	Cases	Days	RIWs	RIW/case*	ALOS
600	Major Procedure during Pregnancy or delivery	224	1,292	512	2.2857	5.8
601	Repeat C/Section with complicating diagnosis	952	4,478	1,346	1.4137	4.7
602	C/S with Complicating Diagnosis	3,648	18,854	6,097	1.6713	5.2
603	Repeat C/Section	2,641	8,261	2,552	0.9663	3.1
604	C/Section	3,471	12,975	4,356	1.2550	3.7
606	Vaginal Delivery with Sterilization	128	322	132	1.0305	2.5
607	Vaginal Delivery with Minor Procedure	253	866	297	1.1751	3.4
608	VBAC with Complicating Diagnosis	336	853	306	0.9119	2.5
609	Vaginal Delivery with Complicating Diagnosis	10,410	28,413	9,489	0.9115	2.7
610	VBAC	578	1,060	441	0.7635	1.8
611	Vaginal Delivery	16,470	32,085	12,030	0.7304	1.9
All Vaginal Deliveries - CMGs 606-611		28,175	63,609	22,696	0.8055	2.3
All complicated Vaginal Births - CMGs 606-609		11,127	30,464	10,224	0.9189	2.7
All C/Sections - CMGs 601-604		10,712	44,568	14,351	1.3397	4.2
All Births		**39,111**	**109,469**	**37,558**	**0.9603**	**2.8**

Source: PURRFECT V9-ICD10; a subset of the data collected on the hospital discharge abstracts and submitted to CIHI
*RIW = Resource Intensity Weighting aka Weighted Case. This measure compares the cost of the CMG (Case Mix Grouping) with the average cost of all hospital cases. Thus RIW allows direct comparison of costs between different types of cases.
RIWs and CMGs are products of CIHI, the Canadian Institute for Health Information

SECTION V

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APPENDIX 1
DEFINITIONS AND NOTES ON INDICATORS

Age
Age on date of event/age at last birth date preceding the event.

Antepartum
Before the onset of labour.

BC Unspecified (Place of Residence)
The postal code is unknown but it is known that the person is a resident of BC.

Birth weight
First weight of the foetus or newborn obtained after birth, expressed in grams. Low birth weight (LBW) - birth weight is less than 2,500 grams. Very low birth weight (VLBW) - birth weight is less than 1,500 grams. (Excludes newborns with weight between 0 – 300 grams).

Breastfeeding at Discharge
Indicates the mother is breastfeeding the baby at discharge (includes expressed milk). If mom is breast and bottle-feeding (mixed feeding) at discharge it is reported as breastfeeding.

As of April 2004 discharges, breastfeeding definitions in the PDR have been updated to include the WHO/UNICEF recommendations. The current Annual Report does not include these definitions.

Exclusive breastfeeding:
No food or liquid other than breast milk, not even water, is given to the infant from birth by the mother, health care provider or family member/supporter with the exception of undiluted drops of syrups consisting of vitamin or mineral supplements or medicines (BCC adapted from WHO/UNICEF, 2004).

Breast milk and Formula (Partial Breast milk):
Infant receives both breast milk and supplementation (such as formula, water, glucose water) with the exception of undiluted drops of syrups consisting of vitamin or mineral supplements or medicines during the hospital period.

No Breast milk:
The infant/child receives no breast milk.

Care Provider for Delivery
Person who provides the actual, hands-on care for the delivery of the baby. The categories are: OB/GYN – includes obstetricians (or fellow) and obstetrical residents; Family physician – includes general practitioners, medical student intern (MSI) and family practice residents; Midwife - includes registered midwife and midwife trainee; Surgeon/other – includes surgeons, family members, ambulance attendants; Nurse/No Attendant/Unknown – includes nurse or if the patient delivers by herself and no one is in attendance; or Unknown – indicates there was no documentation.

Count of cases
The most basic measure is a simple count of cases or conditions of interest and is often expressed as a variable. Such figures are important for strategic planning in health care systems, especially in terms of resource allocation. Counts of cases provide an idea of the number of people who will require a specific treatment, intervention or service. The definition of a variable is any attribute, phenomenon or event that can have different values but is expressed as a single data element:

- Yes, no, not applicable
- A number, e.g. age

Caesarean Section (C/Section) Method of Delivery
A delivery involving the surgical incision of the abdomen and uterine walls.

Electronic Foetal Monitoring (EFM)
Mother received external or internal electronic foetal heart monitoring during 1st or 2nd stage of labour. May include patients with electronic foetal monitoring during latent phase of labour. Mothers that did not go into labour are classified as "Not Applicable".

Episiotomy
A surgical incision into the perineum and vagina at the time of birth. If it is unknown if mother received an episiotomy, this case would be included in the category "No".

Fertility Rate
The number of live births occurring in a given time period divided by the number of women of child bearing age for Residents of a geographic area. BC rates are per 1,000 women aged 15 to 44.

Frequency
Number of events or cases in a category.

Health Authority (HA)/Health Service Delivery Areas (HSDA) – Delivery
Refers to the Health Authority or Health Service Delivery Area in which the patient delivered. The BC Ministry of Health has defined six macro level administrative boundaries called health authorities, which govern the manner in which health care services are delivered within the province of BC. Health Authorities are further divided into 16 Health Service Delivery areas. HSDAs are micro level geographic boundaries. There may be more than one institution in a HA or HSDA.

Health Authority (HA)/ Health Service Delivery Areas (HSDA) – Residence
Refers to the Health Authority or Health Service Delivery Area in which the patient resided at the time of delivery. Statistics relating to the client's residence are determined via the Translation Master File (TMF). The TMF file is a comprehensive demographic mapping file, which consists of valid BC postal codes and their associated Health Service Delivery Areas (HSDA) and Health Authorities (HA). The geographic area to which a postal code belongs seldom changes over time but in cases where the postal code has changed, appropriate amendments have been made to reflect that postal code's associated HSDA for that particular year.

Home Birth
Birth that occurred at home and mother was not admitted to an inpatient facility within 24 hours of the birth. The primary care provider was a BC registered midwife.

Induction of Labour
Patient who received instrumental or pharmacological assistance to promote labour, prior to the onset of first stage of labour. A patient may be induced by any of the following methods: Artificial Rupture of Membranes (ARM), Oxytocin, Prostaglandin or other methodology. A failed medical induction is classified as an induction. Induction is categorized as "unknown" if it is unknown how the patient's labour was initiated.

Intrapartum (IP)
The period between the onset of the first stage of labour and the delivery of the placenta.

Live Birth
The complete expulsion or extraction from the mother, irrespective of the duration of the pregnancy, of a foetus in which there is breathing, beating of the heart, pulsation of the umbilical cord or unmistakable movement of voluntary muscle, whether or not the umbilical cord has been cut or the placenta is attached.

Maternal Smoking
There is documentation that the patient smoked during the current pregnancy. If a patient smoked at any time during pregnancy, even if she quit during the pregnancy, she is categorized as a smoker in the current pregnancy.

Multiple Birth
Birth in which more than one infant is born, including live births and stillbirths.

Multiple Pregnancy
A pregnancy with more than one foetus.

Non-resident
The woman delivers in British Columbia but is not a resident of British Columbia. She may be from out of province or out of country.

Nullipara
A woman who has never produced a viable offspring (500 grams birth weight or 20 weeks gestation) in a previous pregnancy.

Parity ≥ 1
The condition of having carried a previous pregnancy to a point of viability (500 grams birth weight or 20 weeks gestation) regardless of outcome.

Postpartum LOS – Vaginal/ Caesarean Section
Length of hospital stay calculated from delivery date/time to discharge date/time of mother, stratified into vaginal and caesarean births. This category excludes those who delivered at home with a Registered Midwife in attendance.

Proportion
A proportion is a measure of the number of persons having a specific condition or intervention at a designated time. It is defined as the number of existing cases divided by total population from which those arose. It is reported as a percent, for example, the percent of women giving birth in a specific health region, of all women in the region.

Rate
"A rate is a measure of the frequency of occurrence of a phenomenon. In epidemiology, demography and vital statistics, a rate is an expression of the frequency with which an event occurs in a defined population; the use of rates rather than raw numbers is essential for comparison of experience between populations at different times, different places or among different classes of persons. The components of a rate are the numerator, the denominator, the specified time in which events occur and usually a multiplier, a power of 10, which converts the rate from an awkward fraction to a decimal or whole number". (A Dictionary of Epidemiology, 3rd Edition. John M. Last, Oxford University Press, 1995)

Early Neonatal Mortality Rate
May be expressed mathematically as the formula:

$$= \frac{\text{Number of deaths among infants less than 7 days during a given period x 1000}}{\text{Total live births during that period}}$$

Infant Mortality Rate
May be expressed mathematically as the formula:

$$= \frac{\text{Number of deaths among infants under 1 year during a given period x 1000}}{\text{Total live births during that period}}$$

Late Neonatal Mortality Rate
May be expressed mathematically as the formula:

$$= \frac{\text{Number of deaths among infants between 7-27 days during a given period x 1000}}{\text{Total live births during that period}}$$

Neonatal Mortality Rate
May be expressed mathematically as the formula:

$$= \frac{\text{Number of deaths among infants less than 28 days during a given period x 1000}}{\text{Total live births during that period}}$$

Neonatal Survival Rate
May be expressed mathematically as the formula:

$$= \frac{\text{Number of total live births - total neonatal deaths x 1000}}{\text{Total live births during that period}}$$

Perinatal Mortality Rate
May be expressed mathematically as the formula:

$$= \frac{\text{Total stillbirths + total early neonatal deaths during a given period x 1000}}{\text{Total births during that period}}$$

Post Neonatal Mortality Rate
May be expressed mathematically as the formula:

$$= \frac{\text{Number of deaths among infants between 28 days to 1 year during a given period x 1000}}{\text{Total live births during that period}}$$

Stillbirth Rate
May be expressed mathematically as the formula:

$$= \frac{\text{Number of stillbirths during a given period x 1000}}{\text{Total births during that period}}$$

Stillbirth
The complete expulsion or extraction from the maternal body after at least 20 weeks of gestation or after attaining a weight of at least 500 grams of a foetus in which at birth, there is no breathing, beating heart, pulsation of the umbilical cord or unmistakable movement of voluntary muscle.

Total Births
All live births and stillbirths in the province of British Columbia for the given year.

Vaginal Method of Delivery
The complete separation of an infant from the maternal body via the vaginal canal.

APPENDIX 2
BRITISH COLUMBIA PERINATAL DATABASE - INFORMATION RESOURCES

Multiple reports can be accessed and various methods can be used to obtain BCPDR data in order to conduct analysis on perinatal processes and outcomes in British Columbia:

- **Hospital Reports** – these are hospital-specific, pre-programmed reports, which can be run at all locations where the database is installed. Other participating sites, where the database is not installed, may obtain their specific hospital reports from the BCPDR central office.

- **Ad hoc Reports** – the database can be used to answer specific requests through user-defined queries. These queries can be developed and run at the hospital installation sites or at the BCPDR central office.

- **BC Facility Comparison Reports** – these reports are created annually and allow the individual facility to compare and benchmark selected maternal and newborn events and outcomes with provincial and similar sized sites.

- **Perinatal Database Reporting Tool** - in 2002 the Perinatal Reporting Tool (PRT) was released by the BCRCP. The Perinatal Reporting Tool is an interactive CD, which has been designed to allow health care providers, administrators and data analysts access to summarized data sets extracted from the BC Perinatal Database Registry. The PRT can be used for analysis of population based and comparative reporting between institutions, Health Authorities and against provincial totals for some of the most common and/or important practices and health outcomes related to perinatal care. The PRT is a user-friendly tool that enables users to conduct their own analytical requests. A second version of the Perinatal Reporting Tool, with enhanced functionality and updated data sets, was released in September 2003. The third version of the Perinatal Reporting Tool, which contains data from April 1, 1999 to March 31, 2002 will be released in January 2005.

- **Specific Requests for Data** – clients, health care professionals, researchers etc., may request specific data via the web at <http://www.bcrcp.ca >. See Appendix 7, page 64

APPENDIX 3
HEALTH AUTHORITIES, HEALTH SERVICE DELIVERY AREAS AND INSTITUTIONS

Health Authority	Health Services Delivery Area	Institution Name
Fraser	Fraser East	Chilliwack General Hospital Fraser Canyon Hospital Matsqui-Sumas-Abbotsford General Hospital Mission Memorial Hospital
	Fraser North	Burnaby Hospital Eagle Ridge Hospital & Health Care Centre Ridge Meadows Hospital & Health Care Centre Royal Columbian Hospital
	Fraser South	Delta Hospital Langley Memorial Hospital Peace Arch District Hospital Surrey Memorial Hospital
Interior	East Kootenay	Creston Valley Hospital East Kootenay Regional Hospital (Cranbrook Regional Hospital) Elk Valley Hospital (Fernie) Golden and District General Hospital Invermere and District Hospital Kimberley and District Hospital Sparwood General Hospital
	Kootenay Boundary	Arrow Lakes Hospital Boundary Hospital Castlegar and District Community Health Centre Kootenay Boundary Regional Hospital (Trail Regional Hospital) Kootenay Lake District Hospital Slocan Community Health Centre Victorian Community Health Centre of Kaslo
	Okanagan	Kelowna General Hospital Penticton Regional Hospital Princeton General Hospital South Okanagan General Hospital Summerland Health Centre Vernon Jubilee Hospital
	Thompson Cariboo Shuswap	100 Mile District General Hospital Ashcroft and District General Hospital Cariboo Memorial Hospital Dr. Helmcken Memorial Hospital Lillooet Hospital and Health Centre Nicola Valley Health Centre Queen Victoria Hospital Royal Inland Hospital Shuswap Lake General Hospital St. Bartholomew's Hospital

Health Authority	Health Services Delivery Area	Institution Name
Northern Health	Northeast	Chetwynd General Hospital Dawson Creek and District Hospital Fort Nelson General Hospital Fort St. John General Hospital
	Northern Interior	G.R. Baker Memorial Hospital Lakes District Hospital and Health Centre MacKenzie and District Hospital McBride and District Hospital Prince George Regional Hospital St. John Hospital Stuart Lake Hospital
	Northwest	Bulkley Valley District Hospital Kitimat General Hospital Mills Memorial Hospital Prince Rupert Regional Hospital Queen Charlotte Islands General Hospital, Queen Charlotte City Stewart General Hospital Wrinch Memorial Hospital
Vancouver Coastal	North Shore/ Coast Garibaldi	Bella Coola General Hospital Lions Gate Hospital Powell River General Hospital R.W. Large Memorial Hospital Squamish General Hospital St. Mary's Hospital, Sechelt
	Richmond	The Richmond Hospital
	Vancouver	St. Paul's Hospital Vancouver General Hospital
Vancouver Island	Central Vancouver Island	Cowichan District Hospital Ladysmith and District General Hospital Nanaimo Regional General Hospital Tofino General Hospital West Coast General Hospital
	North Vancouver Island	Campbell River and District General Hospital Port Alice Hospital Port Hardy Hospital Port McNeill and District Hospital Cormorant Island Community Health Centre St. Joseph's General Hospital
	South Vancouver Island	Lady Minto Gulf Islands Hospital Saanich Peninsula Hospital Victoria General Hospital
PHSA	Provincial Health Services Authority	BC Women's Hospital

APPENDIX 4

TRENDS OF TOTAL FERTILITY RATES

BRITISH COLUMBIA, 1950-2003

Year	Total Fertility Rate	Live Births
1950	3,074	27,116
1951	3,201	28,077
1952	3,327	29,827
1953	3,542	31,746
1954	3,656	32,946
1955	3,748	34,138
1956	3,875	36,241
1957	3,921	38,744
1958	3,900	39,577
1959	3,958	39,971
1960	3,949	40,116
1961	3,785	38,591
1962	3,709	38,128
1963	3,564	37,478
1964	3,284	35,897
1965	2,710	33,669
1966	2,442	32,502
1967	2,307	32,899
1968	2,228	33,687
1969	2,223	35,383
1970	2,185	36,861
1971	1,994	34,852
1972	1,890	34,563
1973	1,751	34,352
1974	1,735	35,450
1975	1,682	36,281
1976	1,618	35,848
1977	1,636	36,691
1978	1,620	37,231
1979	1,721	38,432
1980	1,716	40,104
1981	1,718	41,679
1982	1,749	42,942
1983	1,751	43,047
1984	1,781	44,040
1985	1,642	42,989
1986	1,608	41,711
1987	1,608	41,610
1988	1,646	42,854
1989	1,651	43,591
1990	1,688	45,344
1991	1,673	45,344
1992	1,669	46,038
1993	1,636	45,956
1994	1,637	46,830
1995	1,603	46,697
1996	1,540	45,956
1997	1,473	44,397
1998	1,437	42,866
1999	1,408	41,747
2000	1,374	40,492
2001	1,385	40,392
2002	1,369	39,900
2003	1,388	40,285

Source : BC Vital Statistics Agency

Note : Total Fertility Rate - Sum of age-specific fertility rates multiplied by the number of years in each age group (see glossary for definition). Rates per 1,000 women age 15 to 44. Non-residents are excluded.

LIVE BIRTHS, DEATHS, MARRIAGES, AND STILLBIRTHS

BRITISH COLUMBIA, 1950-2003

Year	Mid-Year Population	Live Births		Deaths		Marriages		Stillbirths	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate
1950	1,137,000	27,116	23.85	11,581	10.19	11,110	9.77	369	13.43
1951	1,165,210	28,077	24.10	11,638	9.99	11,272	9.67	365	12.83
1952	1,205,000	29,827	24.75	12,080	10.02	11,081	9.20	375	12.42
1953	1,248,000	31,746	25.44	12,218	9.79	11,298	9.05	375	11.67
1954	1,295,000	32,946	25.44	12,414	9.59	10,991	8.49	373	11.19
1955	1,342,000	34,138	25.44	12,816	9.55	11,011	8.20	381	11.04
1956	1,398,464	36,241	25.91	13,415	9.59	11,950	8.55	413	11.27
1957	1,482,000	38,744	26.14	13,711	9.25	12,620	8.52	422	10.77
1958	1,538,000	39,577	25.73	13,741	8.93	12,094	7.86	414	10.35
1959	1,567,000	39,971	25.51	14,336	9.15	11,910	7.60	404	10.01
1960	1,602,000	40,116	25.04	14,696	9.17	11,203	6.99	437	10.78
1961	1,629,100	38,591	23.69	14,403	8.84	10,935	6.71	410	10.51
1962	1,660,000	38,128	22.97	14,912	8.98	11,196	6.74	377	9.79
1963	1,699,000	37,478	22.06	15,029	8.85	11,677	6.87	476	12.54
1964	1,745,000	35,897	20.57	16,051	9.20	12,158	6.97	485	13.33
1965	1,797,000	33,669	18.74	15,784	8.78	13,639	7.59	447	13.10
1966	1,873,674	32,502	17.35	16,290	8.69	14,682	7.84	409	12.43
1967	1,945,000	32,899	16.91	16,170	8.31	16,026	8.24	422	12.66
1968	2,003,000	33,687	16.82	16,828	8.40	16,914	8.44	433	12.69
1969	2,060,000	35,383	17.18	17,377	8.44	18,284	8.88	468	13.05
1970	2,128,000	36,861	17.32	17,020	8.00	20,020	9.41	407	10.92
1971	2,184,620	34,852	15.95	17,783	8.14	20,389	9.33	442	12.52
1972	2,241,400	34,563	15.42	18,021	8.04	20,659	9.22	356	10.20
1973	2,302,400	34,352	14.92	18,095	7.86	21,303	9.25	339	9.77
1974	2,375,700	35,450	14.92	19,177	8.07	21,734	9.15	364	10.16
1975	2,433,200	36,281	14.91	19,151	7.87	21,824	8.97	414	11.28
1976	2,466,610	35,848	14.53	18,788	7.62	21,536	8.73	361	9.97
1977	2,493,800	36,691	14.71	18,021	7.23	21,156	8.48	330	8.91
1978	2,530,100	37,231	14.72	19,057	7.53	21,388	8.45	331	8.81
1979	2,571,200	38,432	14.95	19,204	7.47	22,087	8.59	313	8.08
1980	2,640,100	40,104	15.19	19,371	7.34	23,830	9.03	316	7.82
1981	2,744,470	41,679	15.19	19,857	7.24	24,694	9.00	371	8.82
1982	2,787,700	42,942	15.40	20,704	7.43	23,831	8.55	317	7.33
1983	2,813,800	43,047	15.30	19,895	7.07	23,692	8.42	310	7.15
1984	2,847,700	44,040	15.47	20,781	7.30	23,394	8.22	303	6.83
1985	2,990,000	42,989	14.38	21,131	7.07	22,270	7.45	333	7.69
1986	3,004,074	41,711	13.88	21,007	6.99	21,843	7.27	308	7.33
1987	3,050,141	41,610	13.64	21,615	7.09	23,417	7.68	291	6.94
1988	3,115,665	42,854	13.75	22,357	7.18	24,514	7.87	295	6.84
1989	3,198,547	43,591	13.63	22,781	7.12	25,177	7.87	324	7.38
1990	3,291,379	45,344	13.78	23,414	7.11	25,226	7.66	298	6.53
1991	3,373,399	45,344	13.44	23,816	7.06	23,665	7.02	298	6.53
1992	3,470,307	46,038	13.27	24,454	7.05	23,762	6.85	297	6.41
1993	3,571,525	45,956	12.87	25,602	7.17	23,478	6.57	292	6.31
1994	3,681,750	46,830	12.72	25,829	7.02	23,772	6.46	311	6.60
1995	3,784,008	46,697	12.34	26,224	6.93	23,632	6.25	350	7.44
1996	3,882,043	45,956	11.84	27,389	7.06	22,882	5.89	292	6.31
1997	3,959,698	44,397	11.21	27,258	6.88	21,883	5.53	335	7.49
1998	3,997,113	42,866	10.72	27,805	6.96	21,778	5.45	278	6.44
1999	4,028,280	41,747	10.36	27,862	6.92	21,628	5.37	294	6.99
2000	4,060,133	40,492	9.97	27,311	6.73	22,099	5.44	281	6.89
2001	4,078,447	40,392	9.90	28,231	6.92	20,571	5.04	283	6.96
2002	4,114,981	39,900	9.70	28,707	6.98	21,261	5.17	299	7.44
2003	4,146,580	40,285	9.72	29,108	7.02	21,975	5.30	289	7.12

Source : BC Vital Statitics Agency

Note: Rates shown for births, deaths and marriages are crude rates per 1,000 population.
Stillbirth rate is per 1,000 total births (live births plus stillbirths).
The definition of a stillbirth was revised in 1963 and 1986.
Population information from BC STATS, Ministry of Management Services.
Above information includes late registrations and amendments.
Gender unknown included. Non-residents are excluded from all data except marriages.

INFANT MORTALITY
BRITISH COLUMBIA AND CANADA, 1965 - 2003

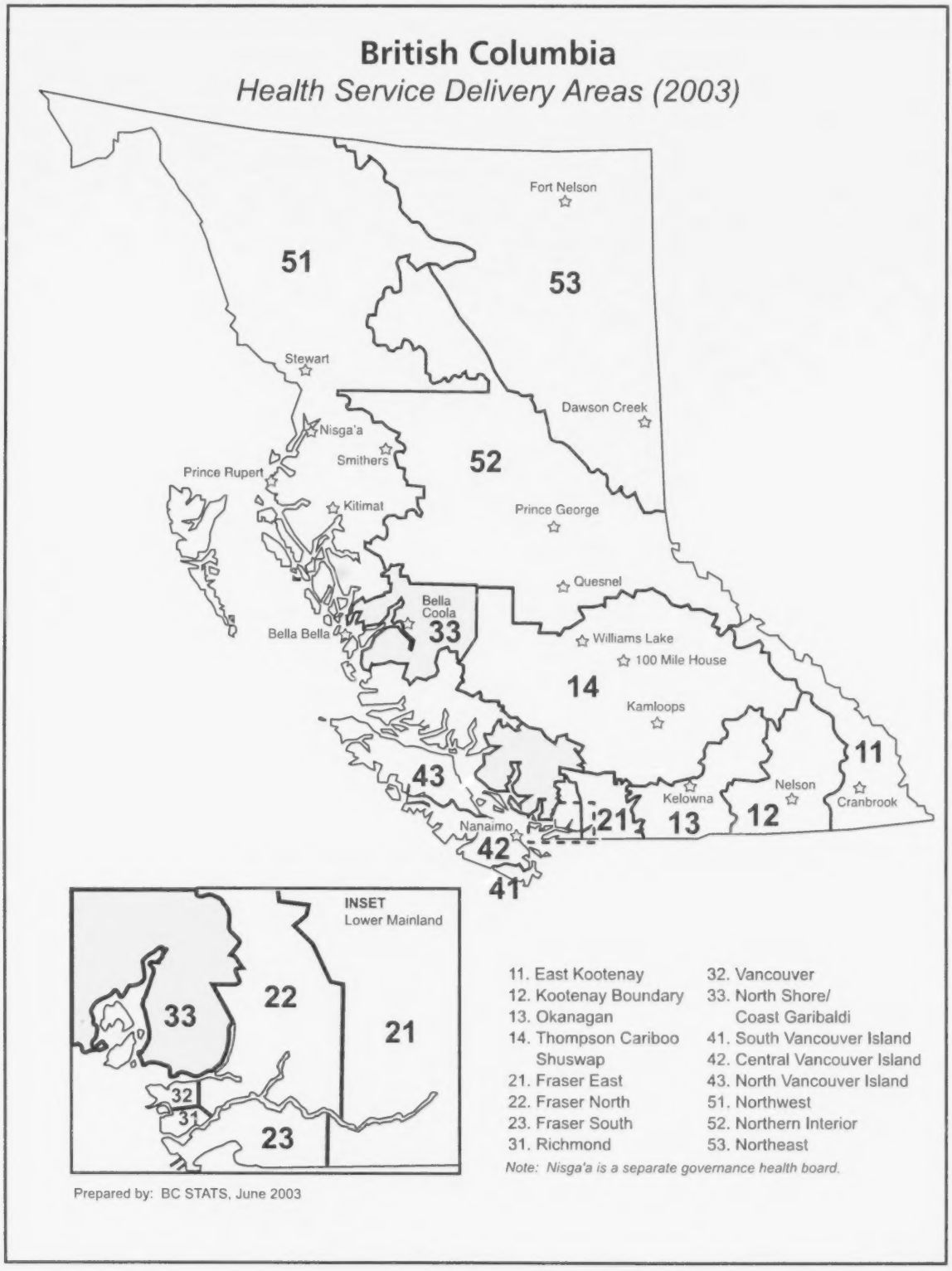
	British Columbia									Canada
	Age at Death							Total		
	0-6 Days		0-27 Days		28-364 Days		N.S.			
Year	Number	Rate	Number	Rate	Number	Rate		Number	Rate	Rate
1965	415	12.33	453	13.45	227	6.74	3	683	20.29	24.0
1966	435	13.38	494	15.20	263	8.09	4	761	23.41	23.1
1967	429	13.04	470	14.29	218	6.63	1	689	20.94	22.0
1968	375	11.13	438	13.00	214	6.35	4	656	19.47	21.0
1969	329	9.30	374	10.57	199	5.62	-	573	16.19	19.0
1970	369	10.01	416	11.29	193	5.24	2	611	16.58	19.0
1971	409	11.74	450	12.91	185	5.31	-	635	18.22	17.5
1972	322	9.32	373	10.79	195	5.64	1	569	16.46	17.0
1973	317	9.23	363	10.57	185	5.39	3	551	16.04	16.0
1974	310	8.74	348	9.82	196	5.53	2	546	15.40	15.0
1975	278	7.66	321	8.85	169	4.66	1	491	13.53	14.3
1976	292	8.15	324	9.04	152	4.24	2	478	13.33	13.5
1977	246	6.70	276	7.52	200	5.45	-	476	12.97	12.4
1978	245	6.58	286	7.68	178	4.78	-	464	12.46	12.0
1979	196	5.10	239	6.22	167	4.35	-	406	10.56	10.9
1980	188	4.69	235	5.86	186	4.64	-	421	10.50	10.4
1981	232	5.57	259	6.21	140	3.36	3	402	9.65	9.6
1982	217	5.05	251	5.85	150	3.49	-	401	9.34	9.1
1983	193	4.48	212	4.92	145	3.37	2	359	8.34	8.5
1984	184	4.18	205	4.65	150	3.41	1	356	8.08	8.1
1985	180	4.19	198	4.61	133	3.09	-	331	7.70	8.0
1986	164	3.93	195	4.68	147	3.52	-	342	8.20	7.9
1987	157	3.77	193	4.64	160	3.85	-	353	8.48	7.3
1988	191	4.46	220	5.13	136	3.17	-	356	8.31	7.2
1989	186	4.27	215	4.93	138	3.17	-	353	8.10	7.3
1990	182	4.01	220	4.85	112	2.47	-	332	7.32	6.8
1991	140	3.09	164	3.62	126	2.78	-	290	6.40	6.4
1992	150	3.26	170	3.69	104	2.26	-	274	5.95	6.1
1993	117	2.55	135	2.94	110	2.39	-	245	5.33	6.3
1994	163	3.48	186	3.97	90	1.92	-	276	5.89	6.3
1995	157	3.36	180	3.85	94	2.01	-	274	5.87	6.1
1996	131	2.85	158	3.44	68	1.48	-	226	4.92	5.6
1997	125	2.82	146	3.29	56	1.26	-	202	4.55	5.5
1998	94	2.19	114	2.66	60	1.40	-	174	4.06	5.3
1999	86	2.06	107	2.56	51	1.22	-	158	3.78	5.3
2000	84	2.07	105	2.59	45	1.11	-	150	3.70	5.3
2001	103	2.55	126	3.12	36	0.89	-	162	4.01	5.2
2002	97	2.43	124	3.11	54	1.35	-	178	4.46	*
2003	102	2.53	118	2.93	45	1.12	-	163	4.05	*

Source: BC Vital Statitics Agency

Note: Rates per 1,000 live births in the specified year.
N.S. - Not stated.
Above information includes late registrations and amendments.
Canadian rates from Statistics Canada. *Rates were not available.
Non-residents are excluded

APPENDIX 5
MAP - Health Authorities

MAP - Health Service Delivery Areas



APPENDIX 6
OTHER RELEVANT SOURCES OF INFORMATION

Below is a list of sources and web sites where other relevant information on perinatal health information and statistics at the provincial, national and international level can be located.

Provincial

BC Ministry of Health Services: <http://www.hlth.gov.bc.ca>
BC Vital Statistics Agency <http://www.vs.gov.bc.ca>
PURRFECT 9-ICD10 (Population Utilization Rates and Referrals For Easy Comparative Tables), BC Ministry of Health
The Northern & Central Alberta Perinatal Outreach Program: <http://www.ncapop.ca>
Alberta Perinatal Health Program: <http://www.ncapop.ca/programinfo.html>
Niday Perinatal Database (Eastern Ontario): <http://www.pppeso.on.ca/>
PEI Reproductive Care Perinatal Database Report <http://www.gov.pe.ca/infopei/onelisting.php3?number=20616>
Reproductive Care Program of Nova Scotia: <http://rcp.nshealth.ca/rcp_3029.html>

National

Canadian Institute for Health Information: <http://www.cihi.ca>
Canadian Institute of Child Health: <http://www.cich.ca>
Canadian Perinatal Surveillance System: <http://www.phac-aspc.gc.ca/rhs-ssg/>
Health Canada: <http://www.hc-sc.gc.ca>
Statistics Canada: <http://www.statcan.gc.ca>
Vital Statistics (Can): <http://www.statcan.ca>

International

Centers for Disease Control and Promotion (CDC): <http://www.cdc.gov>
Medline Plus – Health Information: <http://www.nlm.nih.gov/medlineplus/healthstatistics.html>
National Institute of Child Health & Human Development (US): <http://www.nichd.nih.gov>
National Perinatal Association (US): <http://www.nationalperinatal.org>
National Perinatal Epidemiology Unit (NPEU): <http://www.npeu.ox.ac.uk>
Statistical Resources on Women and Gender: <http://www.library.wisc.edu/libraries>
Vermont Oxford Network: <http://www.vtoxford.org>
World Health Organization (WHO): <http://www.who.int>

APPENDIX 7

BRITISH COLUMBIA PERINATAL DATABASE REGISTRY INFORMATION REQUEST FORM

PDR Request # _____

Requester Information

Name: _____ Title: _____

Organization: _____

Address: _____

Telephone #: _____ Fax: _____

Email Address: _____ Signature: _____

Data Request

Purpose: (Briefly describe the purpose for which data are being requested)

_____

_____

_____

_____

Data elements required: (list of fields or queries)

_____

_____

_____

_____

Date range required: _____ (or) From: _____ To: _____

Frequency of data request:
❑ One time only ❑ Annually ❑ Other: _____

Date required by: _____

Special Instructions: _____

The website for the BC Perinatal Database Registry Information For Request form is:
http://www.bcrcp.ca/

Care Provider Present at Delivery by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		2000/2001											2001/2002											2002/2003										
		Obstetrician		Family Physician		Midwife		Nurse		Other & Unknown		Total	Obstetrician		Family Physician		Midwife		Nurse		Other & Unknown		Total	Obstetrician		Family Physician		Midwife		Nurse		Other & Unknown		Total
HA	HSDA	#	%	#	%	#	%	#	%	#	%	#	#	%	#	%	#	%	#	%	#	%	#	#	%	#	%	#	%	#	%	#	%	#
FHA	FE	696	28.7	1585	65.3	24	1.0	114	4.7	9	0.4	2428	747	29.7	1620	64.5	26	1.0	113	4.5	7	0.3	2513	808	31.3	1594	61.8	32	1.2	136	5.3	10	0.4	2580
	FN	2098	41.6	2546	50.4	85	1.7	176	3.5	144	2.9	5049	2210	44.0	2481	49.4	131	2.6	108	2.2	92	1.8	5022	2254	46.6	2285	47.2	134	2.8	144	3.0	22	0.5	4839
	FS	3344	62.1	1475	27.4	77	1.4	472	8.8	18	0.3	5386	3596	65.7	1391	25.4	86	1.6	379	6.9	20	0.4	5472	3631	64.3	1555	27.6	88	1.6	357	6.3	13	0.2	5644
Total		6138	47.7	5606	43.6	186	1.4	762	5.9	171	1.3	12863	6553	50.4	5492	42.2	243	1.9	600	4.6	119	0.9	13007	6693	51.2	5434	41.6	254	1.9	637	4.9	45	0.3	13063
IHA	EK	110	17.8	458	74.0	0	0.0	25	4.0	26	4.2	619	91	16.0	396	69.5	11	1.9	30	5.3	42	7.4	570	95	15.5	427	69.7	14	2.3	31	5.1	46	7.5	613
	KB	148	27.6	333	62.0	27	5.0	14	2.6	15	2.8	537	158	30.0	323	61.4	29	5.5	12	2.3	4	0.8	526	188	36.8	277	54.2	34	6.7	11	2.2	1	0.2	511
	OK	951	36.7	1521	58.6	20	0.8	87	3.4	15	0.6	2594	983	38.9	1451	57.4	15	0.6	74	2.9	5	0.2	2528	947	39.6	1353	56.5	26	1.1	64	2.7	4	0.2	2394
	TCS	510	28.3	1147	63.7	0	0.0	92	5.1	53	2.9	1802	498	27.4	1214	66.9	0	0.0	36	2.0	68	3.7	1816	471	27.0	1154	66.2	0	0.0	45	2.6	72	4.1	1742
Total		1719	31.0	3459	62.3	47	0.8	218	3.9	109	2.0	5552	1730	31.8	3384	62.2	55	1.0	152	2.8	119	2.2	5440	1701	32.3	3211	61.0	74	1.4	151	2.9	123	2.3	5260
NHA	NE	180	21.9	620	75.3	0	0.0	19	2.3	4	0.5	823	138	16.1	688	80.3	0	0.0	25	2.9	6	0.7	857	173	19.4	699	78.5	0	0.0	16	1.8	2	0.2	890
	NI	382	24.3	1040	66.1	13	0.8	103	6.5	35	2.2	1573	399	26.3	996	65.6	18	1.2	72	4.7	34	2.2	1519	362	25.0	989	68.3	32	2.2	56	3.9	8	0.6	1447
	NW	230	23.4	704	71.8	1	0.1	33	3.4	13	1.3	981	232	24.7	663	70.5	0	0.0	37	3.9	8	0.9	940	287	30.5	618	65.7	0	0.0	33	3.5	3	0.3	941
Total		792	23.5	2364	70.0	14	0.4	155	4.6	52	1.5	3377	769	23.2	2347	70.8	18	0.5	134	4.0	48	1.4	3316	822	25.1	2306	70.3	32	1.0	105	3.2	13	0.4	3278
VCHA	NSCG	657	32.5	1183	58.6	48	2.4	79	3.9	53	2.6	2020	649	35.4	1020	55.7	57	3.1	64	3.5	42	2.3	1832	658	34.3	1096	57.1	57	3.0	70	3.6	39	2.0	1920
	RICH	706	50.5	651	46.5	0	0.0	39	2.8	3	0.2	1399	798	55.3	589	40.8	1	0.1	51	3.5	3	0.2	1442	696	51.8	588	43.8	1	0.1	54	4.0	4	0.3	1343
	VANC	1230	73.8	329	19.7	63	3.8	24	1.4	20	1.2	1666	1198	69.2	434	25.1	79	4.6	15	0.9	5	0.3	1731	1179	71.0	381	23.0	73	4.4	22	1.3	5	0.3	1660
Total		2593	51.0	2163	42.5	111	2.2	142	2.8	76	1.5	5085	2645	52.8	2043	40.8	137	2.7	130	2.6	50	1.0	5005	2533	51.5	2065	41.8	131	2.7	146	3.0	48	1.0	4923
VIHA	CVI	857	50.3	757	44.4	37	2.2	47	2.8	7	0.4	1705	1021	56.9	675	37.6	38	2.1	56	3.1	5	0.3	1795	945	55.4	652	38.2	61	3.6	41	2.4	7	0.4	1706
	NVI	416	43.5	475	49.7	56	5.9	7	0.7	2	0.2	956	459	48.0	407	42.5	76	7.9	12	1.3	3	0.3	957	424	45.5	395	42.4	94	10.1	17	1.8	2	0.2	932
	SVI	889	32.7	1625	59.9	148	5.5	41	1.5	12	0.4	2715	956	34.6	1533	55.5	215	7.8	50	1.8	7	0.3	2761	1025	37.8	1460	53.8	178	6.6	45	1.7	6	0.2	2714
Total		2162	40.2	2857	53.1	241	4.5	95	1.8	21	0.4	5376	2436	44.2	2615	47.4	329	6.0	118	2.1	15	0.3	5513	2394	44.7	2507	46.8	333	6.2	103	1.9	15	0.3	5352
PHSA*		4818	71.1	1650	24.4	95	1.4	140	2.1	70	1.0	6773	4640	71.2	1612	24.7	103	1.6	116	1.8	43	0.7	6514	4710	69.7	1796	26.6	130	1.9	81	1.2	42	0.6	6761
HB		0	0.0	0	0.0	366	98.9	1	0.3	3	0.8	370	0	0.0	0	0.0	467	98.9	0	0.0	5	1.1	472	0	0.0	0	0.0	488	99.2	0	0.0	4	0.8	492
Province		18222	46.3	18099	45.9	1060	2.7	1513	3.8	502	1.3	39396	18773	47.8	17493	44.5	1352	3.4	1258	3.2	390	1.0	39267	18853	48.2	17321	44.3	1442	3.7	1223	3.1	290	0.7	39129

*PHSA - refers to BC Women's Hospital patients only
Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

DATA TABLE 6A

Teen Births by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		2000/2001								2001/2002								2002/2003							
		<=17		18-19		Total Teen Mothers		Mothers >=20	Total Mothers	<=17		18-19		Total Teen Mothers		Mothers >=20	Total Mothers	<=17		18-19		Total Teen Mothers		Mothers >=20	Total Mothers
HA	HSDA	#	%	#	%	#	%	#	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
FHA	FE	43	1.6	120	4.4	163	6.0	2572	2735	100.0	58	2.0	120	4.2	178	6.2	2697	2875	100.0	51	1.7	109	3.7	160	5.4	2799	2959	100.0
	FN	51	0.9	121	2.2	172	3.1	5293	5465	100.0	44	0.8	110	2.0	154	2.8	5313	5467	100.0	28	0.5	90	1.7	118	2.2	5333	5451	100.0
	FS	65	1.0	160	2.4	225	3.3	6513	6738	100.0	67	1.0	139	2.1	206	3.0	6555	6761	100.0	58	0.8	142	2.1	200	2.9	6711	6911	100.0
Total		**159**	**1.1**	**401**	**2.7**	**560**	**3.7**	**14378**	**14938**	**100.0**	**169**	**1.1**	**369**	**2.4**	**538**	**3.6**	**14565**	**15103**	**100.0**	**137**	**0.9**	**341**	**2.2**	**478**	**3.1**	**14843**	**15321**	**100.0**
IHA	EK	23	3.5	51	7.9	74	11.4	574	648	100.0	23	3.8	41	6.7	64	10.5	544	608	100.0	9	1.4	40	6.1	49	7.5	604	653	100.0
	KB	7	1.2	13	2.2	20	3.3	581	601	100.0	8	1.4	15	2.5	23	3.9	569	592	100.0	7	1.3	17	3.1	24	4.3	531	555	100.0
	OK	42	1.6	99	3.9	141	5.5	2419	2560	100.0	31	1.2	90	3.6	121	4.8	2384	2505	100.0	43	1.8	67	2.8	110	4.6	2282	2392	100.0
	TCS	47	2.5	123	6.7	170	9.2	1679	1849	100.0	40	2.2	89	4.9	129	7.1	1679	1808	100.0	43	2.5	89	5.1	132	7.6	1607	1739	100.0
Total		**119**	**2.1**	**286**	**5.1**	**405**	**7.2**	**5253**	**5658**	**100.0**	**102**	**1.9**	**235**	**4.3**	**337**	**6.1**	**5176**	**5513**	**100.0**	**102**	**1.9**	**213**	**4.0**	**315**	**5.9**	**5024**	**5339**	**100.0**
NHA	NE	26	3.2	56	6.9	82	10.0	734	816	100.0	19	2.3	48	5.7	67	7.9	776	843	100.0	17	2.0	47	5.5	64	7.4	798	862	100.0
	NI	35	2.2	92	5.8	127	8.0	1467	1594	100.0	40	2.5	91	5.8	131	8.3	1445	1576	100.0	44	2.9	72	4.8	116	7.7	1388	1504	100.0
	NW	43	4.2	56	5.4	99	9.6	934	1033	100.0	42	4.3	69	7.0	111	11.3	873	984	100.0	36	3.7	62	6.3	98	9.9	888	986	100.0
Total		**104**	**3.0**	**204**	**5.9**	**308**	**8.9**	**3135**	**3443**	**100.0**	**101**	**3.0**	**208**	**6.1**	**309**	**9.1**	**3094**	**3403**	**100.0**	**97**	**2.9**	**181**	**5.4**	**278**	**8.3**	**3074**	**3352**	**100.0**
VCHA	NSCG	22	0.9	42	1.8	64	2.7	2313	2377	100.0	24	1.1	35	1.6	59	2.7	2132	2191	100.0	26	1.1	42	1.9	68	3.0	2196	2264	100.0
	RICH	3	0.2	20	1.3	23	1.5	1527	1550	100.0	5	0.3	18	1.2	23	1.5	1515	1538	100.0	4	0.3	14	0.9	18	1.2	1472	1490	100.0
	VANC	37	0.6	59	1.0	96	1.7	5649	5745	100.0	37	0.7	71	1.3	108	1.9	5515	5623	100.0	28	0.5	58	1.0	86	1.5	5539	5625	100.0
Total		**62**	**0.6**	**121**	**1.3**	**183**	**1.9**	**9489**	**9672**	**100.0**	**66**	**0.7**	**124**	**1.3**	**190**	**2.0**	**9162**	**9352**	**100.0**	**58**	**0.6**	**114**	**1.2**	**172**	**1.8**	**9207**	**9379**	**100.0**
VIHA	CVI	52	2.8	103	5.5	155	8.3	1722	1877	100.0	62	3.2	116	5.9	178	9.1	1772	1950	100.0	44	2.3	106	5.7	150	8.0	1726	1876	100.0
	NVI	40	3.9	46	4.7	86	8.7	928	1016	100.0	28	2.8	60	6.0	88	8.8	908	996	100.0	26	2.6	51	5.1	77	7.7	926	1003	100.0
	SVI	35	1.3	78	3.0	113	4.3	2499	2612	100.0	30	1.1	75	2.7	105	3.8	2624	2729	100.0	29	1.1	70	2.6	99	3.7	2568	2667	100.0
Total		**127**	**2.3**	**229**	**4.2**	**356**	**6.5**	**5149**	**5505**	**100.0**	**120**	**2.1**	**251**	**4.4**	**371**	**6.5**	**5304**	**5675**	**100.0**	**99**	**1.8**	**227**	**4.1**	**326**	**5.9**	**5220**	**5546**	**100.0**
BC UNSPEC		**0**	**0.0**	**3**	**6.3**	**3**	**6.3**	**45**	**48**	**100.0**	**1**	**1.4**	**4**	**5.6**	**5**	**7.0**	**66**	**71**	**100.0**	**2**	**4.7**	**3**	**7.0**	**5**	**11.6**	**38**	**43**	**100.0**
NON RES		**0**	**0.0**	**6**	**4.5**	**6**	**4.5**	**126**	**132**	**100.0**	**3**	**2.0**	**6**	**4.0**	**9**	**6.0**	**141**	**150**	**100.0**	**1**	**0.7**	**8**	**5.4**	**9**	**6.0**	**140**	**149**	**100.0**
Province		**571**	**1.4**	**1250**	**3.2**	**1821**	**4.6**	**37575**	**39396**	**100.0**	**562**	**1.4**	**1197**	**3.0**	**1759**	**4.5**	**37508**	**39267**	**100.0**	**496**	**1.3**	**1087**	**2.8**	**1583**	**4.0**	**37546**	**39129**	**100.0**

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

[Only singleton pregnancies, deliveries and births included]

Maternal Smoking During Pregnancy by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		2000/2001						2001/2002						2002/2003					
		Yes		No		Total		Yes		No		Total		Yes		No		Total	
HA	HSDA	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
FHA	FE	408	14.9	2327	85.1	2735	100.0	458	15.9	2417	84.1	2875	100.0	455	15.4	2504	84.6	2959	100.0
	FN	577	10.6	4888	89.4	5465	100.0	546	10.0	4921	90.0	5467	100.0	432	7.9	5019	92.1	5451	100.0
	FS	741	11.0	5997	89.0	6738	100.0	675	10.0	6086	90.0	6761	100.0	675	9.8	6236	90.2	6911	100.0
Total		**1726**	**11.6**	**13212**	**88.4**	**14938**	**100.0**	**1679**	**11.1**	**13424**	**88.9**	**15103**	**100.0**	**1562**	**10.2**	**13759**	**89.8**	**15321**	**100.0**
IHA	EK	144	22.2	504	77.8	648	100.0	125	20.6	483	79.4	608	100.0	142	21.7	511	78.3	653	100.0
	KB	98	16.3	503	83.7	601	100.0	117	19.8	475	80.2	592	100.0	72	13.0	483	87.0	555	100.0
	OK	479	18.7	2081	81.3	2560	100.0	377	15.0	2128	85.0	2505	100.0	394	16.5	1998	83.5	2392	100.0
	TC	425	23.0	1424	77.0	1849	100.0	362	20.0	1446	80.0	1808	100.0	374	21.5	1365	78.5	1739	100.0
Total		**1146**	**20.3**	**4512**	**79.7**	**5658**	**100.0**	**981**	**17.8**	**4532**	**82.2**	**5513**	**100.0**	**982**	**18.4**	**4357**	**81.6**	**5339**	**100.0**
NHA	NE	181	22.2	635	77.8	816	100.0	195	23.1	648	76.9	843	100.0	167	19.4	695	80.6	862	100.0
	NI	321	20.1	1273	79.9	1594	100.0	294	18.7	1282	81.3	1576	100.0	285	18.9	1219	81.1	1504	100.0
	NW	212	20.5	821	79.5	1033	100.0	173	17.6	811	82.4	984	100.0	167	16.9	819	83.1	986	100.0
Total		**714**	**20.7**	**2729**	**79.3**	**3443**	**100.0**	**662**	**19.5**	**2741**	**80.5**	**3403**	**100.0**	**619**	**18.5**	**2733**	**81.5**	**3352**	**100.0**
VCHA	NSCG	204	8.6	2173	91.4	2377	100.0	150	6.8	2041	93.2	2191	100.0	177	7.8	2087	92.2	2264	100.0
	RICH	66	4.3	1484	95.7	1550	100.0	69	4.5	1469	95.5	1538	100.0	64	4.3	1426	95.7	1490	100.0
	VANC	300	5.2	5445	94.8	5745	100.0	269	4.8	5354	95.2	5623	100.0	252	4.5	5373	95.5	5625	100.0
Total		**570**	**5.9**	**9102**	**94.1**	**9672**	**100.0**	**488**	**5.2**	**8864**	**94.8**	**9352**	**100.0**	**493**	**5.3**	**8886**	**94.7**	**9379**	**100.0**
VIHA	CVI	366	19.5	1511	80.5	1877	100.0	382	19.6	1568	80.4	1950	100.0	324	17.3	1552	82.7	1876	100.0
	NVI	211	20.8	805	79.2	1016	100.0	202	20.3	794	79.7	996	100.0	161	16.1	842	83.9	1003	100.0
	SVI	430	16.5	2182	83.5	2612	100.0	415	15.2	2314	84.8	2729	100.0	374	14.0	2293	86.0	2667	100.0
Total		**1007**	**18.3**	**4498**	**81.7**	**5505**	**100.0**	**999**	**17.6**	**4676**	**82.4**	**5675**	**100.0**	**859**	**15.5**	**4687**	**84.5**	**5546**	**100.0**
BC UNSPEC		**10**	**20.8**	**38**	**79.2**	**48**	**100.0**	**14**	**19.7**	**57**	**80.3**	**71**	**100.0**	**12**	**27.9**	**31**	**72.1**	**43**	**100.0**
NON RES		**16**	**12.1**	**116**	**87.9**	**132**	**100.0**	**19**	**12.7**	**131**	**87.3**	**150**	**100.0**	**17**	**11.4**	**132**	**88.6**	**149**	**100.0**
Province		**5189**	**13.2**	**34207**	**86.8**	**39396**	**100.0**	**4842**	**12.3**	**34425**	**87.7**	**39267**	**100.0**	**4544**	**11.6**	**34585**	**88.4**	**39129**	**100.0**

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

DATA TABLE 8A

Breastfeeding at Discharge by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		2000/2001								2001/2002								2002/2003							
		Yes		No		Unknown		Total		NA	Yes		No		Unknown		Total		NA	Yes		No		Unknown		Total		NA
HA	HSDA	#	%	#	%	#	%	#	%	#	#	%	#	%	#	%	#	%	#	#	%	#	%	#	%	#	%	#
FHA	FE	2422	88.9	241	8.8	62	2.3	2725	100.0	10	2557	89.3	236	8.2	70	2.4	2863	100.0	12	2669	90.8	248	8.4	24	0.8	2941	100.0	18
	FN	5031	92.8	360	6.6	29	0.5	5420	100.0	45	5082	93.6	321	5.9	25	0.5	5428	100.0	39	5089	93.8	322	5.9	15	0.3	5426	100.0	25
	FS	6133	91.8	502	7.5	44	0.7	6679	100.0	59	6204	92.5	462	6.9	41	0.6	6707	100.0	54	6371	92.8	448	6.5	46	0.7	6865	100.0	46
Total		13586	91.6	1103	7.4	135	0.9	14824	100.0	114	13843	92.3	1019	6.8	136	0.9	14998	100.0	105	14129	92.8	1018	6.7	85	0.6	15232	100.0	89
IHA	EK	602	93.5	36	5.6	6	0.9	644	100.0	4	547	90.1	49	8.1	11	1.8	607	100.0	1	602	92.3	46	7.1	4	0.6	652	100.0	1
	KB	548	91.5	41	6.8	10	1.7	599	100.0	2	540	93.2	33	5.6	7	1.2	580	100.0	3	509	93.1	30	5.5	8	1.5	547	100.0	6
	OK	2385	92.6	158	6.2	30	1.2	2543	100.0	17	2328	93.3	138	5.5	29	1.2	2496	100.0	10	2190	92.2	168	7.1	16	0.8	2376	100.0	16
	TC	1583	86.0	178	9.7	79	4.3	1840	100.0	9	1615	89.9	154	8.6	28	1.6	1797	100.0	11	1602	92.5	107	6.2	23	1.3	1732	100.0	7
Total		5088	90.4	413	7.3	125	2.2	5626	100.0	32	5039	91.8	374	6.8	75	1.4	5488	100.0	25	4903	92.4	351	6.6	53	1.0	5307	100.0	32
NHA	NE	715	88.7	82	10.2	9	1.1	806	100.0	10	747	88.9	84	10.0	9	1.1	840	100.0	3	756	88.2	93	10.9	8	0.9	857	100.0	5
	NI	1344	84.7	183	11.5	59	3.7	1586	100.0	8	1362	87.4	153	9.8	44	2.8	1559	100.0	17	1284	86.3	179	12.0	25	1.7	1488	100.0	16
	NW	915	89.3	89	8.7	21	2.0	1025	100.0	8	856	88.1	96	9.9	20	2.1	972	100.0	12	867	88.7	91	9.3	19	1.9	977	100.0	9
Total		2974	87.0	354	10.4	89	2.6	3417	100.0	26	2965	88.0	333	9.9	73	2.2	3371	100.0	32	2907	87.5	363	10.9	52	1.6	3322	100.0	30
VCHA	NSCG	2275	96.2	78	3.3	12	0.5	2365	100.0	12	2109	97.1	59	2.7	5	0.2	2173	100.0	18	2171	96.3	74	3.3	10	0.4	2255	100.0	9
	RICH	1417	92.3	108	7.0	10	0.7	1535	100.0	15	1425	93.4	82	6.0	9	0.6	1526	100.0	12	1358	91.6	119	8.0	5	0.3	1482	100.0	8
	VANC	5071	88.9	605	10.6	31	0.5	5707	100.0	38	4997	89.4	583	10.4	10	0.2	5590	100.0	33	5033	90.2	532	9.5	15	0.3	5580	100.0	45
Total		8763	91.2	791	8.2	53	0.6	9607	100.0	65	8531	91.8	734	7.9	24	0.3	9289	100.0	63	8562	91.9	725	7.8	30	0.3	9317	100.0	62
VIHA	CVI	1724	92.6	125	6.7	13	0.7	1862	100.0	15	1791	92.6	124	6.4	20	1.0	1935	100.0	15	1727	92.5	120	6.4	21	1.1	1868	100.0	8
	NVI	927	92.1	62	6.2	17	1.7	1006	100.0	10	915	92.2	59	5.9	18	1.8	992	100.0	4	938	94.3	50	5.0	7	0.7	995	100.0	6
	SVI	2442	93.9	135	5.2	23	0.9	2600	100.0	12	2591	95.4	112	4.1	13	0.5	2716	100.0	13	2497	94.2	135	5.1	20	0.8	2652	100.0	15
Total		5093	93.1	322	5.9	53	1.0	5468	100.0	37	5297	93.9	295	5.2	51	0.9	5643	100.0	32	5162	93.6	305	5.5	48	0.9	5515	100.0	31
BC UNSPEC		34	72.3	12	25.5	1	2.1	47	100.0	1	60	85.7	9	12.9	1	1.4	70	100.0	1	30	69.8	13	30.2	0	0.0	43	100.0	0
NON RES		112	86.2	17	13.1	1	0.8	130	100.0	2	127	87.0	17	11.6	2	1.4	146	100.0	4	128	85.9	18	12.1	3	2.0	149	100.0	0
Province		35650	91.1	3012	7.7	457	1.2	39119	100.0	277	35862	91.9	2791	7.1	362	0.9	39015	100.0	282	35821	92.1	2793	7.2	271	0.7	38885	100.0	244

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

[Only singleton pregnancies, deliveries and births included]

DATA TABLE 9A

Induction of Labour by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		2000/2001						2001/2002						2002/2003					
		Yes		No		Total		Yes		No		Total		Yes		No		Total	
HA	HSDA	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
FHA	FE	514	21.2	1914	78.8	2428	100.0	623	24.8	1890	75.2	2513	100.0	632	24.5	1948	75.5	2580	100.0
	FN	1123	22.2	3926	77.8	5049	100.0	1266	25.2	3756	74.8	5022	100.0	1128	23.3	3711	76.7	4839	100.0
	FS	1270	23.6	4116	76.4	5386	100.0	1387	25.3	4085	74.7	5472	100.0	1368	24.2	4276	75.8	5644	100.0
Total		**2907**	**22.6**	**9956**	**77.4**	**12863**	**100.0**	**3276**	**25.2**	**9731**	**74.8**	**13007**	**100.0**	**3128**	**23.9**	**9935**	**76.1**	**13063**	**100.0**
IHA	EK	155	25.0	464	75.0	619	100.0	147	25.8	423	74.2	570	100.0	124	20.2	489	79.8	613	100.0
	KB	141	26.3	396	73.7	537	100.0	132	25.1	394	74.9	526	100.0	128	25.0	383	75.0	511	100.0
	OK	661	25.5	1933	74.5	2594	100.0	627	24.8	1901	75.2	2528	100.0	572	23.9	1822	76.1	2394	100.0
	TCS	296	16.4	1506	83.6	1802	100.0	361	19.9	1455	80.1	1816	100.0	345	19.8	1397	80.2	1742	100.0
Total		**1253**	**22.6**	**4299**	**77.4**	**5552**	**100.0**	**1267**	**23.3**	**4173**	**76.7**	**5440**	**100.0**	**1169**	**22.2**	**4091**	**77.8**	**5260**	**100.0**
NHA	NE	182	22.1	641	77.9	823	100.0	208	24.3	649	75.7	857	100.0	186	20.9	704	79.1	890	100.0
	NI	267	17.0	1306	83.0	1573	100.0	287	18.9	1232	81.1	1519	100.0	273	18.9	1174	81.1	1447	100.0
	NW	186	19.0	795	81.0	981	100.0	188	20.0	752	80.0	940	100.0	224	23.8	717	76.2	941	100.0
Total		**635**	**18.8**	**2742**	**81.2**	**3377**	**100.0**	**683**	**20.6**	**2633**	**79.4**	**3316**	**100.0**	**683**	**20.8**	**2595**	**79.2**	**3278**	**100.0**
VCHA	NSCG	446	22.1	1574	77.9	2020	100.0	370	20.2	1462	79.8	1832	100.0	398	20.7	1522	79.3	1920	100.0
	RICH	276	19.7	1123	80.3	1399	100.0	298	20.7	1144	79.3	1442	100.0	230	17.1	1113	82.9	1343	100.0
	VANC	396	23.8	1270	76.2	1666	100.0	373	21.5	1358	78.5	1731	100.0	359	21.6	1301	78.4	1660	100.0
Total		**1118**	**22.0**	**3967**	**78.0**	**5085**	**100.0**	**1041**	**20.8**	**3964**	**79.2**	**5005**	**100.0**	**987**	**20.0**	**3936**	**80.0**	**4923**	**100.0**
ViHA	CVI	376	22.1	1329	77.9	1705	100.0	441	24.6	1354	75.4	1795	100.0	392	23.0	1314	77.0	1706	100.0
	NVI	192	20.1	764	79.9	956	100.0	196	20.5	761	79.5	957	100.0	156	16.7	776	83.3	932	100.0
	SVI	731	26.9	1984	73.1	2715	100.0	773	28.0	1988	72.0	2761	100.0	746	27.5	1968	72.5	2714	100.0
Total		**1299**	**24.2**	**4077**	**75.8**	**5376**	**100.0**	**1410**	**25.6**	**4103**	**74.4**	**5513**	**100.0**	**1294**	**24.2**	**4058**	**75.8**	**5352**	**100.0**
PHSA*		**1139**	**16.8**	**5634**	**83.2**	**6773**	**100.0**	**1154**	**17.7**	**5360**	**82.3**	**6514**	**100.0**	**1150**	**17.0**	**5611**	**83.0**	**6761**	**100.0**
HB		**8**	**2.2**	**362**	**97.8**	**370**	**100.0**	**8**	**1.7**	**464**	**98.3**	**472**	**100.0**	**16**	**3.3**	**476**	**96.7**	**492**	**100.0**
Province		**8359**	**21.2**	**31037**	**78.8**	**39396**	**100.0**	**8839**	**22.5**	**30428**	**77.5**	**39267**	**100.0**	**8427**	**21.5**	**30702**	**78.5**	**39129**	**100.0**

*PHSA - refers to BC Women's Hospital patients only

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Electronic Foetal Monitoring by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		2000/2001								2001/2002								2002/2003							
		Yes		No		Moms Laboured		NA	Total Moms	Yes		No		Moms Laboured		NA	Total Moms	Yes		No		Moms Laboured		NA	Total Moms
HA	HSDA	#	%	#	%	#	%	#	#	#	%	#	%	#	%	#	#	#	%	#	%	#	%	#	#
FHA	FE	1817	82.9	375	17.1	2192	100.0	236	2428	1849	81.5	420	18.5	2269	100.0	244	2513	1793	77.6	517	22.4	2310	100.0	270	2580
	FN	4159	88.9	518	11.1	4677	100.0	372	5049	4119	90.9	412	9.1	4531	100.0	491	5022	4021	92.2	340	7.8	4361	100.0	478	4839
	FS	4256	86.9	639	13.1	4895	100.0	491	5386	4035	82.9	832	17.1	4867	100.0	605	5472	3910	77.7	1122	22.3	5032	100.0	612	5644
Total		**10232**	**87.0**	**1532**	**13.0**	**11764**	**100.0**	**1099**	**12863**	**10003**	**85.7**	**1664**	**14.3**	**11667**	**100.0**	**1340**	**13007**	**9724**	**83.1**	**1979**	**16.9**	**11703**	**100.0**	**1360**	**13063**
IHA	EK	392	68.7	179	31.3	571	100.0	48	619	411	79.0	109	21.0	520	100.0	50	570	446	83.8	86	16.2	532	100.0	81	613
	KB	392	80.0	98	20.0	490	100.0	47	537	326	69.8	141	30.2	467	100.0	59	526	322	71.2	130	28.8	452	100.0	59	511
	OK	2201	93.8	145	6.2	2346	100.0	248	2594	2073	91.4	194	8.6	2267	100.0	261	2528	1960	92.7	154	7.3	2114	100.0	280	2394
	TCS	1320	81.0	309	19.0	1629	100.0	173	1802	1278	80.0	319	20.0	1597	100.0	219	1816	1014	65.6	531	34.4	1545	100.0	197	1742
Total		**4305**	**85.5**	**731**	**14.5**	**5036**	**100.0**	**516**	**5552**	**4088**	**84.3**	**763**	**15.7**	**4851**	**100.0**	**589**	**5440**	**3742**	**80.6**	**901**	**19.4**	**4643**	**100.0**	**617**	**5260**
NHA	NE	670	88.2	90	11.8	760	100.0	63	823	734	92.7	58	7.3	792	100.0	65	857	672	85.4	115	14.6	787	100.0	103	890
	NI	1190	83.3	239	16.7	1429	100.0	144	1573	1127	82.6	237	17.4	1364	100.0	155	1519	990	76.9	298	23.1	1288	100.0	159	1447
	NW	764	84.5	140	15.5	904	100.0	77	981	709	82.7	148	17.3	857	100.0	83	940	637	78.3	177	21.7	814	100.0	127	941
Total		**2624**	**84.8**	**469**	**15.2**	**3093**	**100.0**	**284**	**3377**	**2570**	**85.3**	**443**	**14.7**	**3013**	**100.0**	**303**	**3316**	**2299**	**79.6**	**590**	**20.4**	**2889**	**100.0**	**389**	**3278**
VCHA	NSCG	1536	85.9	253	14.1	1789	100.0	231	2020	1348	84.7	243	15.3	1591	100.0	241	1832	1416	83.8	274	16.2	1690	100.0	230	1920
	RICH	1094	86.4	172	13.6	1266	100.0	133	1399	1151	90.3	123	9.7	1274	100.0	168	1442	1071	91.2	103	8.8	1174	100.0	169	1343
	VANC	1357	88.8	171	11.2	1528	100.0	138	1666	1195	77.1	355	22.9	1550	100.0	181	1731	1209	80.5	292	19.5	1501	100.0	159	1660
Total		**3987**	**87.0**	**596**	**13.0**	**4583**	**100.0**	**502**	**5085**	**3694**	**83.7**	**721**	**16.3**	**4415**	**100.0**	**590**	**5005**	**3696**	**84.7**	**669**	**15.3**	**4365**	**100.0**	**558**	**4923**
VIHA	CVI	1098	70.5	460	29.5	1558	100.0	147	1705	1115	69.6	488	30.4	1603	100.0	192	1795	1091	71.0	445	29.0	1536	100.0	170	1706
	NVI	629	72.5	239	27.5	868	100.0	88	956	585	68.9	264	31.1	849	100.0	108	957	522	64.8	284	35.2	806	100.0	126	932
	SVI	1969	81.2	456	18.8	2425	100.0	290	2715	1771	73.0	656	27.0	2427	100.0	334	2761	1356	57.3	1012	42.7	2368	100.0	346	2714
Total		**3696**	**76.2**	**1155**	**23.8**	**4851**	**100.0**	**525**	**5376**	**3471**	**71.1**	**1408**	**28.9**	**4879**	**100.0**	**634**	**5513**	**2969**	**63.0**	**1741**	**37.0**	**4710**	**100.0**	**642**	**5352**
PHSA*		**5182**	**85.0**	**915**	**15.0**	**6097**	**100.0**	**676**	**6773**	**4650**	**81.8**	**1036**	**18.2**	**5686**	**100.0**	**828**	**6514**	**4773**	**80.9**	**1127**	**19.1**	**5900**	**100.0**	**861**	**6761**
HB		**0**	**0.0**	**370**	**100.0**	**0**	**0.0**	**0**	**370**	**0**	**0.0**	**472**	**100.0**	**472**	**100.0**	**0**	**472**	**0**	**0.0**	**492**	**100.0**	**492**	**100.0**	**0**	**492**
Province		**30026**	**83.9**	**5768**	**16.1**	**35794**	**100.0**	**3602**	**39396**	**28476**	**81.4**	**6507**	**18.6**	**34983**	**100.0**	**4284**	**39267**	**27203**	**78.4**	**7499**	**21.6**	**34702**	**100.0**	**4427**	**39129**

*PHSA - refers to BC Women's Hospital patients only

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

[Only singleton pregnancies, deliveries and births included]

Episiotomies by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		2000/2001							2001/2002							2002/2003						
		Yes		No		Total		NA	Yes		No		Total		NA	Yes		No		Total		NA
HA	HSDA	#	%	#	%	#	%	#	#	%	#	%	#	%	#	#	%	#	%	#	%	#
FHA	FE	327	17.3	1558	82.7	1885	100.0	543	411	21.4	1510	78.6	1921	100.0	592	331	17.2	1597	82.8	1928	100.0	652
	FN	809	20.6	3111	79.4	3920	100.0	1129	664	17.8	3071	82.2	3735	100.0	1287	666	18.5	2937	81.5	3603	100.0	1236
	FS	1057	25.4	3109	74.6	4166	100.0	1220	1046	26.0	2973	74.0	4019	100.0	1453	1004	24.3	3132	75.7	4136	100.0	1508
Total		**2193**	**22.0**	**7778**	**78.0**	**9971**	**100.0**	**2892**	**2121**	**21.9**	**7554**	**78.1**	**9675**	**100.0**	**3332**	**2001**	**20.7**	**7666**	**79.3**	**9667**	**100.0**	**3396**
IHA	EK	66	13.1	439	86.9	505	100.0	114	64	13.7	403	86.3	467	100.0	103	67	15.0	379	85.0	446	100.0	167
	KB	53	12.3	378	87.7	431	100.0	106	60	14.7	349	85.3	409	100.0	117	40	10.9	328	89.1	368	100.0	143
	OK	251	12.6	1743	87.4	1994	100.0	600	279	14.6	1633	85.4	1912	100.0	616	222	12.6	1539	87.4	1761	100.0	633
	TCS	178	13.5	1138	86.5	1316	100.0	486	147	11.5	1131	88.5	1278	100.0	538	102	8.4	1119	91.6	1221	100.0	521
Total		**548**	**12.9**	**3698**	**87.1**	**4246**	**100.0**	**1306**	**550**	**13.5**	**3516**	**86.5**	**4066**	**100.0**	**1374**	**431**	**11.4**	**3365**	**88.6**	**3796**	**100.0**	**1464**
NHA	NE	120	18.7	523	81.3	643	100.0	180	129	19.1	548	80.9	677	100.0	180	105	15.6	566	84.4	671	100.0	219
	NI	147	11.9	1086	88.1	1233	100.0	340	130	11.7	985	88.3	1115	100.0	404	115	10.7	963	89.3	1078	100.0	369
	NW	89	11.8	666	88.2	755	100.0	226	82	11.8	614	88.2	696	100.0	244	63	9.5	598	90.5	661	100.0	280
Total		**356**	**13.5**	**2275**	**86.5**	**2631**	**100.0**	**746**	**341**	**13.7**	**2147**	**86.3**	**2488**	**100.0**	**828**	**283**	**11.7**	**2127**	**88.3**	**2410**	**100.0**	**868**
VCHA	NSCG	283	18.3	1261	81.7	1544	100.0	476	264	19.6	1086	80.4	1350	100.0	482	255	17.7	1186	82.3	1441	100.0	479
	RICH	237	22.7	806	77.3	1043	100.0	356	238	23.2	787	76.8	1025	100.0	417	219	23.1	730	76.9	949	100.0	394
	VANC	238	19.5	981	80.5	1219	100.0	447	204	16.6	1026	83.4	1230	100.0	501	222	19.2	934	80.8	1156	100.0	504
Total		**758**	**19.9**	**3048**	**80.1**	**3806**	**100.0**	**1279**	**706**	**19.6**	**2899**	**80.4**	**3605**	**100.0**	**1400**	**696**	**19.6**	**2850**	**80.4**	**3546**	**100.0**	**1377**
VIHA	CVI	196	15.0	1111	85.0	1307	100.0	398	206	15.6	1112	84.4	1318	100.0	477	176	13.9	1088	86.1	1264	100.0	442
	NVI	108	14.5	636	85.5	744	100.0	212	91	12.5	638	87.5	729	100.0	228	74	10.6	622	89.4	696	100.0	236
	SVI	265	13.1	1762	86.9	2027	100.0	688	193	9.9	1758	90.1	1951	100.0	810	196	10.7	1642	89.3	1838	100.0	876
Total		**569**	**14.0**	**3509**	**86.0**	**4078**	**100.0**	**1298**	**490**	**12.3**	**3508**	**87.7**	**3998**	**100.0**	**1515**	**446**	**11.7**	**3352**	**88.3**	**3798**	**100.0**	**1554**
PHSA*		**1298**	**26.0**	**3697**	**74.0**	**4995**	**100.0**	**1778**	**1190**	**25.5**	**3474**	**74.5**	**4664**	**100.0**	**1850**	**1155**	**23.6**	**3744**	**76.4**	**4899**	**100.0**	**1862**
HB		**3**	**0.8**	**367**	**99.2**	**370**	**100.0**	**0**	**1**	**0.2**	**471**	**99.8**	**472**	**100.0**	**0**	**6**	**1.2**	**486**	**98.8**	**492**	**100.0**	**0**
Province		**5725**	**19.0**	**24372**	**81.0**	**30097**	**100.0**	**9299**	**5399**	**18.6**	**23569**	**81.4**	**28968**	**100.0**	**10299**	**5018**	**17.5**	**23590**	**82.5**	**28608**	**100.0**	**10521**

*PHSA - refers to BC Women's Hospital patients only

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

Method of Delivery by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		2000/2001						2001/2002						2002/2003					
		C/Section		Vaginal		Total		C/Section		Vaginal		Total		C/Section		Vaginal		Total	
HA	HSDA	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
FHA	FE	543	22.4	1885	77.6	2428	100.0	592	23.6	1921	76.4	2513	100.0	652	25.3	1928	74.7	2580	100.0
	FN	1129	22.4	3920	77.6	5049	100.0	1287	25.6	3735	74.4	5022	100.0	1236	25.5	3603	74.5	4839	100.0
	FS	1220	22.7	4166	77.3	5386	100.0	1453	26.6	4019	73.4	5472	100.0	1508	26.7	4136	73.3	5644	100.0
Total		**2892**	**22.5**	**9971**	**77.5**	**12863**	**100.0**	**3332**	**25.6**	**9675**	**74.4**	**13007**	**100.0**	**3396**	**26.0**	**9667**	**74.0**	**13063**	**100.0**
IHA	EK	114	18.4	505	81.6	619	100.0	103	18.1	467	81.9	570	100.0	167	27.2	446	72.8	613	100.0
	KB	106	19.7	431	80.3	537	100.0	117	22.2	409	77.8	526	100.0	143	28.0	368	72.0	511	100.0
	OK	600	23.1	1994	76.9	2594	100.0	616	24.4	1912	75.6	2528	100.0	633	26.4	1761	73.6	2394	100.0
	TCS	486	27.0	1316	73.0	1802	100.0	538	29.6	1278	70.4	1816	100.0	521	29.9	1221	70.1	1742	100.0
Total		**1306**	**23.5**	**4246**	**76.5**	**5552**	**100.0**	**1374**	**25.3**	**4066**	**74.7**	**5440**	**100.0**	**1464**	**27.8**	**3796**	**72.2**	**5260**	**100.0**
NHA	NE	180	21.9	643	78.1	823	100.0	180	21.0	677	79.0	857	100.0	219	24.6	671	75.4	890	100.0
	NI	340	21.6	1233	78.4	1573	100.0	404	26.6	1115	73.4	1519	100.0	369	25.5	1078	74.5	1447	100.0
	NW	226	23.0	755	77.0	981	100.0	244	26.0	696	74.0	940	100.0	280	29.8	661	70.2	941	100.0
Total		**746**	**22.1**	**2631**	**77.9**	**3377**	**100.0**	**828**	**25.0**	**2488**	**75.0**	**3316**	**100.0**	**868**	**26.5**	**2410**	**73.5**	**3278**	**100.0**
VCHA	NSCG	476	23.6	1544	76.4	2020	100.0	482	26.3	1350	73.7	1832	100.0	479	24.9	1441	75.1	1920	100.0
	RICH	356	25.4	1043	74.6	1399	100.0	417	28.9	1025	71.1	1442	100.0	394	29.3	949	70.7	1343	100.0
	VANC	447	26.8	1219	73.2	1666	100.0	501	28.9	1230	71.1	1731	100.0	504	30.4	1156	69.6	1660	100.0
Total		**1279**	**25.2**	**3806**	**74.8**	**5085**	**100.0**	**1400**	**28.0**	**3605**	**72.0**	**5005**	**100.0**	**1377**	**28.0**	**3546**	**72.0**	**4923**	**100.0**
VIHA	CVI	398	23.3	1307	76.7	1705	100.0	477	26.6	1318	73.4	1795	100.0	442	25.9	1264	74.1	1706	100.0
	NVI	212	22.2	744	77.8	956	100.0	228	23.8	729	76.2	957	100.0	236	25.3	696	74.7	932	100.0
	SVI	688	25.3	2027	74.7	2715	100.0	810	29.3	1951	70.7	2761	100.0	876	32.3	1838	67.7	2714	100.0
Total		**1298**	**24.1**	**4078**	**75.9**	**5376**	**100.0**	**1515**	**27.5**	**3998**	**72.5**	**5513**	**100.0**	**1554**	**29.0**	**3798**	**71.0**	**5352**	**100.0**
PHSA*		**1778**	**26.3**	**4995**	**73.7**	**6773**	**100.0**	**1850**	**28.4**	**4664**	**71.6**	**6514**	**100.0**	**1862**	**27.5**	**4899**	**72.5**	**6761**	**100.0**
HB		**0**	**0.0**	**370**	**100.0**	**370**	**100.0**	**0**	**0.0**	**472**	**100.0**	**472**	**100.0**	**0**	**0.0**	**492**	**100.0**	**492**	**100.0**
Province		**9299**	**23.6**	**30097**	**76.4**	**39396**	**100.0**	**10299**	**26.2**	**28968**	**73.8**	**39267**	**100.0**	**10521**	**26.9**	**28608**	**73.1**	**39129**	**100.0**

*PHSA - refers to BC Women's Hospital patients only

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

[Only singleton pregnancies, deliveries and births included]

DATA TABLE 18A

Postpartum Length of Stay (Vaginal Deliveries) by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		2000/2001									2001/2002									2002/2003									
		<48 Hours		48-72 Hours		>72 Hours		Total Applicable		UNKN/ NA	NA/ CS	Total	<48 Hours		48-72 Hours		>72 Hours		Total Applicable		UNKN/ NA	NA/ CS	Total	<48 Hours		48-72 Hours		>72 Hours		Total Applicable		UNKN/ NA	NA/ CS	Total
HA	HSDA	#	%	#	%	#	%	#	%	#	#	#	#	%	#	%	#	%	#	%	#	#	#	#	%	#	%	#	%	#	%	#	#	#
PHA	FE	1269	58.5	486	26.2	97	5.2	1852	100.0	33	543	2428	1341	71.4	419	22.3	117	6.2	1877	100.0	44	592	2513	1490	70.3	340	17.9	74	3.9	1904	100.0	24	652	2580
	FN	2447	62.8	1077	27.6	373	9.6	3897	100.0	23	1129	5049	2493	67.1	914	24.8	309	8.3	3716	100.0	19	1287	5022	2477	69.0	881	24.6	230	6.4	3588	100.0	15	1236	4839
	FS	3271	78.6	680	16.4	196	4.8	4149	100.0	17	1220	5386	3264	81.6	596	14.7	150	3.8	4000	100.0	18	1453	5472	3583	87.0	448	10.9	87	2.1	4118	100.0	16	1508	5644
Total		6987	70.6	2243	22.7	648	6.7	9898	100.0	73	2892	12863	7098	74.0	1919	20.0	576	6.0	9593	100.0	82	3332	13007	7550	78.6	1669	17.4	391	4.1	9610	100.0	57	3396	13063
IHA	EK	281	59.9	126	27.0	67	14.0	477	100.0	28	114	619	289	59.9	124	27.8	56	12.5	449	100.0	18	103	570	264	61.1	118	27.3	50	11.6	432	100.0	14	167	613
	KB	193	46.2	136	32.5	89	21.3	418	100.0	13	106	537	181	47.0	145	36.9	87	22.1	393	100.0	16	117	526	189	44.7	121	34.0	76	21.3	356	100.0	12	143	511
	OK	1224	62.1	510	25.9	238	12.1	1972	100.0	22	800	2594	1202	63.2	482	25.3	218	11.5	1902	100.0	10	618	2528	1152	65.6	392	22.4	208	11.9	1752	100.0	8	633	2394
	TCS	870	67.8	290	22.6	123	9.6	1283	100.0	33	486	1802	831	66.2	309	24.6	116	9.2	1256	100.0	22	536	1816	830	69.0	264	21.9	109	9.1	1203	100.0	16	521	1742
Total		2568	61.9	1062	25.7	517	12.5	4150	100.0	96	1306	5552	2483	61.6	1060	26.5	477	11.9	4000	100.0	66	1374	5440	2405	64.3	895	23.9	443	11.8	3743	100.0	53	1464	5260
NHA	NE	283	44.9	225	35.7	122	19.4	630	100.0	13	180	823	325	48.4	216	32.2	130	19.4	671	100.0	6	160	857	362	54.4	200	30.0	104	15.6	666	100.0	5	219	890
	NI	555	48.1	432	35.9	217	18.0	1204	100.0	26	340	1573	579	53.5	371	34.3	133	12.3	1083	100.0	32	404	1519	683	62.4	297	28.4	97	9.3	1047	100.0	31	389	1447
	NW	432	58.3	204	27.5	105	14.2	741	100.0	14	226	981	383	56.7	211	31.3	81	12.0	675	100.0	21	244	940	347	53.5	186	28.7	115	17.7	648	100.0	13	280	941
Total		1270	49.3	861	33.4	444	17.2	2575	100.0	56	746	3377	1287	53.0	798	32.9	344	14.2	2429	100.0	59	828	3316	1342	57.7	643	28.9	316	13.4	2361	100.0	49	868	3278
VCHA	NSCG	870	57.0	441	28.9	214	14.0	1525	100.0	19	476	2020	803	60.1	343	25.7	191	14.3	1337	100.0	13	482	1832	968	61.3	384	27.1	163	11.5	1415	100.0	26	479	1920
	RICH	708	68.1	288	27.7	44	4.2	1040	100.0	3	356	1399	746	72.9	235	23.0	42	4.1	1022	100.0	3	417	1442	693	73.3	224	23.7	29	3.1	946	100.0	3	384	1343
	VANC	675	55.6	379	31.2	159	13.1	1213	100.0	6	447	1666	730	59.6	365	29.8	130	10.6	1225	100.0	5	501	1731	727	63.1	309	26.7	117	10.2	1152	100.0	4	504	1660
Total		2253	59.6	1108	29.3	417	11.0	3778	100.0	28	1279	5085	2278	63.6	943	26.3	363	10.1	3584	100.0	21	1400	5005	2288	65.1	916	26.1	309	8.8	3513	100.0	33	1377	4923
VIHA	CVI	671	52.0	387	30.0	233	18.0	1291	100.0	16	398	1705	733	56.4	352	27.1	214	16.5	1299	100.0	19	477	1795	718	57.9	340	27.4	182	14.7	1240	100.0	24	442	1706
	NVI	420	57.7	203	27.9	105	14.4	728	100.0	16	212	956	418	59.3	214	30.4	73	10.4	705	100.0	24	238	967	404	59.6	197	27.6	87	12.8	678	100.0	18	236	932
	SVI	1090	54.4	622	31.0	292	14.6	2004	100.0	23	686	2715	1005	52.0	622	32.2	304	15.7	1931	100.0	20	810	2761	994	54.5	568	31.1	263	14.4	1825	100.0	13	876	2714
Total		2181	54.2	1212	30.1	630	15.7	4023	100.0	55	1296	5376	2156	54.8	1188	30.2	591	15.0	3935	100.0	63	1515	5513	2116	56.5	1095	29.3	532	14.2	3743	100.0	55	1554	5352
PHSA*		2935	59.0	1479	29.7	560	11.3	4974	100.0	21	1778	6773	2682	57.8	1390	30.0	567	12.2	4639	100.0	25	1850	6514	2899	59.5	1363	28.0	608	12.5	4869	100.0	30	1862	6761
HB		0	0.0	0	0.0	0	0.0	0	0.0	370	0	370	0	0.0	0	0.0	0	0.0	0	0.0	472	0	472	0	0.0	0	0.0	0	0.0	0	0.0	492	0	492
Province		16194	61.9	7068	27.1	3226	11.0	26388	100.0	699	9299	39386	17964	63.7	7298	25.9	2918	10.4	28180	100.0	788	10299	39267	18619	64.9	6621	23.8	2590	9.3	27830	100.0	769	10321	39120

*PHSA - refers to BC Women's Hospital patients only

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

[Only singleton pregnancies, deliveries and births included]

Postpartum Length of Stay (Caesarean Section Deliveries) by Place of Delivery for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

		2000/2001									2001/2002									2002/2003								
		<=96 Hours		>96 Hours		Total Applicable		UNKN/ NA	NA/Vag	Total	<=96 Hours		>96 Hours		Total Applicable		UNKN/ NA	NA/Vag	Total	<=96 Hours		>96 Hours		Total Applicable		UNKN/ NA	NA/Vag	Total
HA	HSDA	#	%	#	%	#	%	#	#	#	#	%	#	%	#	%	#	#	#	#	%	#	%	#	%	#	#	#
FHA	FE	445	85.7	74	14.3	519	100.0	24	1885	2428	480	86.0	78	14.0	558	100.0	34	1921	2513	585	93.2	43	6.8	628	100.0	24	1928	2580
	FN	861	78.1	247	21.9	1128	100.0	1	3920	5049	1069	83.3	214	16.7	1283	100.0	4	3735	5022	1047	84.8	187	15.2	1234	100.0	2	3603	4839
	FS	1091	90.2	119	9.8	1210	100.0	10	4166	5386	1310	90.3	140	9.7	1450	100.0	3	4019	5472	1382	91.8	123	8.2	1505	100.0	3	4136	5644
Total		2417	84.6	440	15.4	2857	100.0	35	9971	12863	2859	86.9	432	13.1	3291	100.0	41	9675	13007	3014	89.5	353	10.5	3367	100.0	29	9667	13063
IHA	EK	62	60.8	40	39.2	102	100.0	12	505	619	61	64.2	34	35.8	95	100.0	8	467	570	130	83.3	26	16.7	156	100.0	11	446	613
	KB	50	48.5	53	51.5	103	100.0	3	431	537	58	52.7	52	47.3	110	100.0	7	409	526	78	56.5	60	43.5	138	100.0	5	368	511
	OK	460	77.4	134	22.6	594	100.0	6	1994	2594	455	74.5	156	25.5	611	100.0	5	1912	2528	490	77.8	140	22.2	630	100.0	3	1761	2394
	TCS	363	78.4	100	21.6	463	100.0	23	1316	1802	401	77.3	118	22.7	519	100.0	19	1278	1816	417	83.1	85	16.9	502	100.0	19	1221	1742
Total		935	74.1	327	25.9	1262	100.0	44	4246	5552	975	73.0	360	27.0	1335	100.0	39	4066	5440	1115	78.2	311	21.8	1426	100.0	38	3796	5260
NHA	NE	118	66.7	59	33.3	177	100.0	3	643	823	122	68.2	57	31.8	179	100.0	1	677	857	165	75.3	54	24.7	219	100.0	0	671	890
	NI	226	69.9	98	30.1	326	100.0	14	1233	1573	304	78.1	85	21.9	389	100.0	15	1115	1519	272	76.0	86	24.0	358	100.0	11	1078	1447
	NW	142	64.8	77	35.2	219	100.0	7	755	981	162	70.1	69	29.9	231	100.0	13	696	940	153	57.7	112	42.3	265	100.0	15	661	941
Total		488	67.6	234	32.4	722	100.0	24	2631	3377	588	73.6	211	26.4	799	100.0	29	2488	3316	590	70.1	252	29.9	842	100.0	26	2410	3278
VCHA	NSCG	276	59.4	189	40.6	465	100.0	11	1544	2020	316	67.1	155	32.9	471	100.0	11	1350	1832	359	77.0	107	23.0	466	100.0	13	1441	1920
	RICH	280	80.7	67	19.3	347	100.0	9	1043	1399	328	78.8	88	21.2	416	100.0	1	1025	1442	347	88.5	45	11.5	392	100.0	2	949	1343
	VANC	274	62.0	168	38.0	442	100.0	5	1219	1666	353	71.2	143	28.8	496	100.0	5	1230	1731	358	72.0	139	28.0	497	100.0	7	1156	1660
Total		830	66.2	424	33.8	1254	100.0	25	3806	5085	997	72.1	386	27.9	1383	100.0	17	3605	5005	1064	78.5	291	21.5	1355	100.0	22	3546	4923
VIHA	CVI	234	60.8	151	39.2	385	100.0	13	1307	1705	322	69.1	144	30.9	466	100.0	11	1318	1795	301	69.7	131	30.3	432	100.0	10	1264	1706
	NVI	149	71.3	60	28.7	209	100.0	3	744	956	159	74.0	56	26.0	215	100.0	13	729	957	160	70.5	67	29.5	227	100.0	9	696	932
	SVI	468	68.9	211	31.1	679	100.0	9	2027	2715	599	74.9	201	25.1	800	100.0	10	1951	2761	616	70.7	255	29.3	871	100.0	5	1838	2714
Total		851	66.8	422	33.2	1273	100.0	25	4078	5376	1080	72.9	401	27.1	1481	100.0	34	3998	5513	1077	70.4	453	29.6	1530	100.0	24	3798	5352
PHSA*		1300	73.4	471	26.6	1771	100.0	7	4995	6773	1370	74.2	476	25.8	1846	100.0	4	4664	6514	1452	78.3	402	21.7	1854	100.0	8	4899	6761
HB		0	0.0	0	0.0	0	0.0	0	370	370	0	0.0	0	0.0	0	0.0	0	472	472	0	0.0	0	0.0	0	0.0	0	492	492
Province		6821	74.6	2318	25.4	9139	100.0	160	30097	39396	7869	77.6	2266	22.4	10135	100.0	164	28968	39267	8312	80.1	2062	19.9	10374	100.0	147	28608	39129

*PHSA - refers to BC Women's Hospital patients only

Note: Please refer to back flap for legend of the Health Authorities and Health Service Delivery Areas

[Only singleton pregnancies, deliveries and births included]

DATA TABLE 20A

Low and Very Low Birth Weight by Place of Residence for Health Service Delivery Areas, Health Authorities and Province, 2000/2001, 2001/2002, 2002/2003

| | | 2000/2001 | | |

LEGEND

Health Authority (HA)	
FHA	Fraser HA
IHA	Interior HA
NHA	Northern HA
VCHA	Vancouver Coastal HA
VIHA	Vancouver Island HA
PHSA	Provincial Health Services Authority
BC UNSPEC	Resident of BC - Postal Code Unknown
NON RES	Non Resident of BC
HB	Home Birth

Health Service Delivery Area (HSDA)	
FE	Fraser East
FN	Fraser North
FS	Fraser South
EK	East Kootenay
KB	Kootenay Boundary
OK	Okanagan
TCS	Thompson Cariboo Shuswap
NE	Northeast
NI	Northern Interior
NW	Northwest
NSCG	Northshore/ Coast Garibaldi
RICH	Richmond
VANC	Vancouver
CVI	Central Vancouver Island
NVI	North Vancouver Island
SVI	South Vancouver Island